Air Conditioning Cuts Costly Errors for Electronics Firm . . . *Pg. 18*

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Humidity, Lack of Fresh Air Found In Fallout Shelter

HYANNIS, Mass. — Lack of fresh air and high humidities were the greatest problems encountered by a Boston newspaper reporter and his family who spent seven days in a fallout shelter in a test sponsored by the Massachusetts Civil Defense Agency and his newspaper.

Following an interview with the family after its emergence from the shelter, John J. Devlin, Massachusetts civil defense director, said that one of the first considerations in planning shelters would be to lick the high humidity problems.

The family's clothing was mildewed, their shoes were coming apart, labels peeled off of their canned goods supply so that food could not be identified, and the dampness silenced their transistor radio.

Defense Dept. Denies Waste Charges on Capehart Housing

WASHINGTON, D. C. — The U.S. Defense Department has issued a blanket denial to charges by the General Accounting Office of "unnecessary spending on Capehart housing" which included a reference to "luxury features such as central air conditioning."

A Pentagon spokesman said that the Defense Department *(Continued on Back Page, Col. 4)*

Govt. 'Air Purifier' Concern Two-Fold But Doesn't Affect 'Air Cleaners'

Recent news stories published in the NEWS, namely, "'Air Purifiers' Use Queried In Baltimore" published in the July 25 issue, and "U.S. Seizes 46 Air Cleaners In Cleveland Store," published in the Aug. 8 issue, have apparently created some confusion over the difference between "air purification" devices and "air cleaning" equipment. There is also some confusion over the concern which public officials have expressed about these devices.

Writes P. W. Aitkenhead, president, Electro-Air Cleaner Co., Inc.: "The story 'Air Purifier Use Queried In Baltimore' in the July 25 issue pertains to the type of so-called 'air purifiers' that contain ultra-violet lamps and thus produce ozone. Electro-Air produces electronic air cleaners designed to remove all airborne contaminants. There is no similarity between the two types of equipment, yet I have had a flood of mail asking if your article pertains to our equipment. In the interest of being fair and factual, I would like to suggest that you publish another article, pointing out that the 'air purifier' story did not pertain to true electronic air cleaning equipment."

The quotation from the letter pretty well clarifies the situation with respect to the July 25 issue story. The concern of officials in this instance, as stated, is with those "air purifiers" principally *(Continued on Page 4, Col. 5)*

Tecumseh Buys Semiconductor Manufacturer

TECUMSEH, Mich. — Tecumseh Products Co. has announced that it has purchased all of the outstanding stock of Ohio Semiconductors, Inc., Columbus, Ohio.

Announcement of the purchase was made in a joint statement by R. W. Herrick, Tecumseh board chairman, and Dr. W. E. Bulman, president of Ohio Semiconductors. The Columbus firm will operate as a subsidiary of Tecumseh.

Herrick pointed out in his statement that the purchase is another phase of the diversification program that Tecumseh has been developing over a period of years.

The announcement said that "Ohio Semiconductors is a leading pioneer in the art of producing high mobility compound *(Continued on Back Page, Col. 1)*

Bulova Enters Radiant Heat Control Field

NEW YORK CITY — The entry of Bulova Watch Co., Inc. into the field of automatic control of electric radiant heating was announced recently.

Harry B. Henshel, Bulova president, said American Time Products, Inc., a wholly-owned subsidiary, has acquired exclusive rights to produce and market a line of precision automatic radiant heating controls developed by the Harry Alfred Mulvany Laboratory of Berkeley, Calif. The purchase price was not disclosed.

The new units will be manufactured at American Time Products' plant in Woodside, N. Y., under the direction of J. N. Heed, president.

American Time Products, Henshel explained, has for 25 years *(Continued on Back Page, Col. 1)*

Jennings Bows Out As Director of ASHRAE Research

NEW YORK CITY—Burgess H. Jennings, Director of Research for the American Society of Heating, Refrigerating & Air Conditioning Engineers, will leave that post to return to Northwestern university this Fall, it has been announced by E. P. Palmatier, new chairman of the ASHRAE Research and Technical Committee.

Palmatier in a special report also outlined the present status and general objectives of the society's research program. He said that the organization's Long Range Planning Committee is making a special study of the entire research program. It will report its findings prior *(Continued on Page 25, Col. 2)*

Fedder's Earnings Up 79% for Nine Months

MASPETH, N. Y.—Earnings of Fedders Corp. for the nine months ended May 31 were 79% above those of a year earlier and exceeded those for all of fiscal 1959, Salvatore Giordano, president, said in his report to stockholders.

Results for the period, Giordano said, not only reflected the exceptionally heavy shipments of room air conditioners in the fiscal first quarter, but also *(Continued on Page 25, Col. 1)*

Carrier Set To Rebuild Hermetics In Houston Plant

HOUSTON, Texas — Carrier Air Conditioning Co. will rebuild hermetic compressors in sizes from 2 to 15 hp. in a new assembly operation to be established this year in Houston, according to Russell Gray, president.

The new facilities will speed delivery to the entire area west of the Mississippi and will reduce freight costs now being absorbed by Carrier on compressors still in warranty. The move will also benefit dealers who are now paying one way freight to Syracuse, N. Y. on compressors which are not in warranty.

Compressors from east of the Mississippi, with the exception of the New Orleans and Memphis areas, will continue to be sent to Syracuse for rebuilding.

The facilities will occupy about 10,000 sq. ft. of the present 40,000 sq. ft. warehouse of Carrier-Houston Corp., a wholly owned Carrier distributorship. Management of the new operation will be under William C. Egan, president of Carrier-Houston Corp.

Bertram Rose, quality control foreman in the Syracuse plant of Carrier, will move to Houston to supervise the new facilities, which are expected to employ *(Continued on Page 25, Col. 5)*

Mfr. Cooling Sales Up, Says Govt. Survey

1960 Shipments May Top '59 by 10%, Commerce Department Indicates

WASHINGTON, D. C.—Manufacturers' shipments of most types of air conditioning and refrigeration equipment increased substantially in the first five months of 1960 over the same period in 1959, the Business and Defense Services Administration, U.S. Department of Commerce, reported recently.

Estimates of industry sales by manufacturers thus far in 1960, made earlier this year by the NEWS, have proved to be "right on the nose" if the government figures reported in the accompanying story are substantially correct.

Total 1960 shipments are expected to exceed those in 1959 by 10%. Exports in the first five months of 1960 were 27% greater than in the first half of 1959, the agency declared.

In the air conditioning segment of the industry, shipments of most items were greater in *(Continued on Back Page, Col. 2)*

Inside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

Is He Really?

Any business which fails to check the reference *(and experience)* of a candidate for a job stands a 50% chance of hiring the wrong man, Rawle Deland of Thorndike Deland Associates tells us.

Not only can a reference-check put a finger on applicants who falsify their records, or are concealing lack of experience, but it also has a positive side.

Knowing what a man actually has done to prove (and improve) himself is a great help in assessing his capabilities for doing another job well.

Spot-checking his references may give you a better picture of a man than he overmodestly paints of himself.

Although some reference-givers tend to be too damning, equally dangerous are the well-intentioned reference-givers who are dishonest in a "charitable" way.

Stressing the importance of *honesty*, and accurate appraisals of experience-backgrounds, talent-recruiter Deland sketches four common types of false reference-givers:

1. *The legal eagle* — who once was sued or threatened by a former employe about whom he gave an honest opinion, and who is now so gun-shy he'll never tell the truth about anyone.

2. *The hatchet man* — who is quick to damn a good man with petty, fault-finding remarks.

3. *The unforgiving boss* — who thinks that any employe who ever left his firm is no good automatically.

4. *The bag of wind*—who is full of meaningless words and worthless appraisals.

Although it's been said that salaries are one thing a man can lie about and still go to Heaven, a professional searcher usually can estimate an executive's salary within 10%—if he knows *(Continued on Page 10, Col. 1)*

Palm Springs, Calif. Proposal Would Limit Rooftop Equipment

PALM SPRINGS, Calif.—The Palm Springs city council is considering a proposed ordinance that would prohibit ducts or mechanical air conditioning equipment more than 18 in. high from being installed on rooftops in the commercial zones of the city.

The proposal would also prohibit rooftop installations that can be seen by a person of ordinary vision within 200 ft. of the building.

The action was reportedly started by a "Rube Goldberg" network of pipes and ducts on the roof of a new downtown drugstore.

"It looks unsightly," declared Mayor Frank Bogert.

Not Yet Ready, Say Some

Begin Formation of Silver Shield Program In New Orleans Despite Some Questions

NEW ORLEANS — A group of local air conditioning and heating contractors have begun action to form a New Orleans Indoor Comfort Bureau despite some expressed skepticism that New Orleans is not yet ready for Silver Shield.

Temporary officers were elected last month and plans are being made to start the prerequisite 12-week Silver Shield training course sometime in September or October.

The Silver Shield program, now adopted by nine cities around the country, is aimed at upgrading residential heating and air conditioning installations by training contractors to make proper installations and to certify Silver Shield quality.

Temporary officers elected to supervise establishment of the local bureau were Theodore Offner, manager of the air conditioning division of Gulf Engineering Co., chairman; Ronald R. Santos, sales representative of Louisiana Gas Service Co., vice chairman; Joseph S. Riorda, dealer representative for New Orleans Public Service Inc., secretary; and William H. Hosey, co-owner of Ace Refrigeration Service, treasurer.

The four officers and Harold Flettrich of Flettrich Engineering, director, have begun work drafting a charter and appointing committees for standards, education, membership, and telephone book listing.

Decision to organize a local bureau came at the second of two organizational meetings held during July.

At the first meeting, negative reaction to Silver Shield was expressed by John T. Knight, manager of Equitable Equipment Co., and Philip J. Thompson, president of the Master Refrigeration & Air Conditioning Association and the Louisiana Refrigeration & Air Conditioning Association.

Knight felt such a move was "ill-timed" because the local industry was split wide open over a licensing law, because local contractors would not be willing to bear the expense of a Silver Shield office, and because a majority of the city's 350 contractors would not support or join the organization.

Neither Knight nor Thompson attended the second meeting at which the decision to go ahead was made.

Randall A. Nelson, public relations director, represented National Warm Air Heating & Air Conditioning Association at the first meeting. James D. Nolan, assistant public relations director, represented the national group at the second meeting.

After the second meeting, Nolan said NWAHACA felt it should establish the local bureau despite existing skepticism because "the bureau can serve only to help the industry and we feel many of the doubters will join later."

Both meetings were sponsored by Louisiana Power & Light Co., New Orleans Public Service Inc., and Louisiana Gas Service Co.

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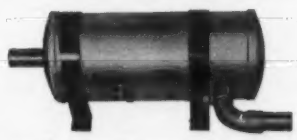

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Timer

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KRAMER TRENTON CO., Trenton 5, N. J.

47 YEARS OF CONTINUOUS ACHIEVEMENT IN HEAT TRANSFER

Licensing Law Dies Natural Death In Louisiana House

BATON ROUGE, La.—Legislation which would have created a state board to register all air conditioning and refrigeration contractors in New Orleans died before it reached the floor of the Louisiana House of Representatives.

The bill was permitted to "die a natural death" largely because legislators said it would be best if such a licensing law were passed by the New Orleans city council before coming to the capital for statewide consideration.

As written, the law would have affected only cities with 500,000 or more population, eliminating all cities in the state except New Orleans.

Said John T. Knight, manager of Equitable Equipment Co. in New Orleans and one of the state's leading spokesmen in the trades:

"We just didn't think it was wise to push the thing at this particular time. We don't think, now, that we'll ever get a tumble from the state until we first get a law from the city."

The legislation died while New Orleans area contractors were planning an industry-wide "vacation" to protest the city council's failure to adopt a local licensing law. Plans for the walkout were indefinite as of a recent date, however, and many contractor believed the "vacation" would not be held.

At the present time, only one parish (county) has a licensing law which covers contractors in air conditioning and refrigeration. This is Jefferson Parish.

Frederick L. Tiedman Of Fedders Drowns

DEPOSIT, N. Y. — Frederick L. Tiedeman, 39, an assistant manager of customer relations for Fedders Corp., was drowned recently in Silver Lake near here.

Guidebooks Tell How

1,428 Motor Models Can Be Replaced With Very Few Under New G-E Program

SCHENECTADY, N. Y. — A new fractional horsepower, shaded-pole motor replacement plan, enabling dealers, wholesalers, and distributors to replace 1,428 motor models with a small number of new replacement models, has been announced by General Electric Co.

Motors that can be replaced as part of this plan include those now in use in condensing units, refrigerators, freezers, unit heaters, unit coolers, exhaust fans, refrigeration display cases, hair dryers, vending machines, room air conditioners, and many other similar air-moving or mechanical load applications.

About 90% of the millions of General Electric 3½-in. diameter motors in use today can be replaced by four new models as part of the plan being implemented by the company's Specialty Motor Dept., Fort Wayne, Ind.

Five models may be used to replace up to 75% of the original 4-in. diameter motors now in use and eight different 5-in. models can replace 64% of their original counterparts, according to studies made by the department.

Additional models provide up to 98 or 99% coverage of each frame size. Models included in the replacement plan are readily interchangeable with other motors of similar size and ratings, said department engineers.

General Electric has compiled two guidebooks exclusively for its sales engineers and distributors. Each contains a copyrighted replacement guide which lists the 1,428 original models sold during the past 15 years and the appropriate replacement model for each.

A description of any modification work that might be needed is also included.

Another chart lists several stocking plans for distributors showing the percent of motors presently in use which can be serviced by a particular General Electric replacement model.

Each guide also tabulates the characteristics of each replacement model, including output, r.p.m., poles, rotation, voltage, frequency, and shaft and lead descriptions.

Shreveport Issues 72 Permits for Cooling Jobs In July

SHREVEPORT, La.—During July, the city's Air Conditioning Dept. issued 72 permits for installations costing a total of $134,230, reports Clyde Juneau, air conditioning inspector.

In June, 159 permits were issued for a total equipment and installation cost of $292,341. A breakdown on July follows:

Residential: Year-round air conditioning and heating—20; air conditioning—5; heating—23; replacements—1.

Commercial: Year-round air conditioning and heating—7; air conditioning — 7; heating — 1; replacements—2.

Alterations and/or additions —1. Refrigeration—5.

Utility Will Lease Gas Air Conditioning

DALLAS—Lone Star Gas Co. has announced a leasing plan for gas air conditioning units.

The program will apply to both commercial and residential uses of 3 and 4½-ton models.

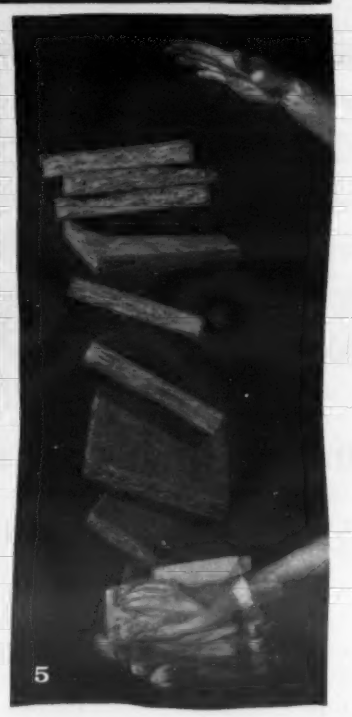
Claimed to be the first of its kind in the Southwest, the plan provides the lessee with air conditioning for a nominal monthly charge that includes routine maintenance and service.

Springfield Proposal

SPRINGFIELD, Ill. — A proposal to license air conditioning firms in Springfield is now being studied by city Fire and Health Commissioner F. S. O'Hara.

The proposal is sponsored by local air conditioning dealers.

13 years of use-and-abuse prove there's no duct liner quite so rugged as ULTRALITE®



ULTRALITE Duct Liner is the *original* lightweight, low-density glass fiber liner made exclusively of long, strong textile-type glass fibers. Since it was introduced to the heating and air conditioning field in 1947:

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But all this hasn't mattered, because ULTRALITE is the world's most rugged glass fiber duct liner. Come what may, it will not flake off into the air stream, shake off, settle, dent, pack down, rot, corrode, mildew, tear, dissolve, or otherwise lose its original insulating thickness and density. As the photos suggest, it is ① super-tough, ② pleasant to handle, ③ unaffected by water, ④ outstanding in thermal efficiency, and ⑤ unusually resilient, always springing back to its original thickness when compressed.

In addition to its ruggedness, ULTRALITE Duct Liner offers outstanding acoustical protection. And for all practical purposes, its air friction coefficient is the same as bare sheet metal!

All these extras cost you and your customers not a penny more. And for many of the same reasons that have made ULTRALITE *Duct Liner* industry's number one choice, you'll also want to try ULTRALITE *Duct Insulation*. The next time you need glass fiber duct liner or insulation, get the most for your money by calling your nearby ULTRALITE distributor.

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ALBUQUERQUE, N. M., Mt. States Insulation Co.
AMARILLO, Tex., McDonald Engineering & Insulating Co.
Morrison Supply Co.
ATLANTA, Ga., Reynolds Aluminum Supply Co.
AUSTIN, Tex., Cinbar Engineering Co.
BALTIMORE, Md., Leroy Insulation Co.
BANGOR, Me., Eastern Glass Co.
BATON ROUGE, La., Eagle Asbestos & Packing Co.
BILLINGS, Mont., Big Horn Supply, Inc.
BIRMINGHAM, Ala., Reynolds Aluminum Supply Co.
Shook & Fletcher Supply Co.
BOSTON, Mass., Homans-Kohler, Inc.
BRIDGEPORT, Conn., Robert A. Keasbey Co., Inc.
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BURLINGTON, Vt., Pipe Insulators, Inc.
CHAMPAIGN, Ill., The Lewie-David Co.
CHARLESTON, W. Va., Asbestos & Insulating Co.
CHARLOTTE, N. C., D & B Insulation Co.
CHICAGO, Ill., E. C. Carlson Co.
Culberg Asbestos & Cork Co.
CHILLICOTHE, Ohio, Southern Ohio Insulating Co.
CHRISTOPHER, Ill., Hoe Supply Co.
CINCINNATI, Ohio, R. E. Kramig Co.
CLEVELAND, Ohio, Ohio Asbestos & Insulation Co.
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COLUMBUS, Ohio, Santeler Brothers
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CORPUS CHRISTI, Tex., Precision Insulation Co.
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EL PASO, Tex., M & M Refrigeration & Supply Co.
ERIE, Pa., Laco-McMullen Co.
EVANSVILLE, Ind., Geo. Koch Sons, Inc.
FALCONER, N. Y., Laco Roofing
FT. SMITH, Ark., Gunn Distributing Co.
FT. WAYNE, Ind., M. H. Hilt, Inc.
FT. WORTH, Tex., Bracken Co.
GREENSBORO, N. C., Starr Davis Co., Inc.
GULFPORT, Miss., Paine Supply Co.
HOUSTON, Tex., Precision Insulation Co.
INDIANAPOLIS, Ind., Lyon Lumber & Supply Co.
IRON MOUNTAIN, Mich., Champion, Inc.
JACKSON, Miss., Paine Refrigeration & Supply Co.
JACKSONVILLE, Fla., Eckles Distributors, Inc.
Ferber Sheet Metal Works
Reynolds Alum. Sup. Co.
JOPLIN, Mo., Joplin Cement Co.
KANSAS CITY, Mo., Central Supply Co.
Kelley Asbestos Prod.
KEWANEE, Ill., Mechanical Insulation Co., Inc.
LITTLE ROCK, Ark., Gunn Distributing Co.
LOS ANGELES, Calif., Accurate Insulation Co., Inc.
Western Fibrous Glass Products Co.
LOUISVILLE, Ky., General Insulation & Roofing Co.
LUBBOCK, Tex., Mechanical Equip. Co.
Morrison Supply Co.
MACON, Ga., Industry Insulation Co.
MARIETTA, Ohio, Asbestos & Insulating Co.
MEMPHIS, Tenn., John A. Denie's Sons, Co.
Gibbons Supply Co.
MIAMI, Fla., Reynolds Aluminum Supply Co.
Southern Metal Products Co.
MILWAUKEE, Wisc., F. R. Dengel Co.
MINNEAPOLIS, Minn., Asbestos Products, Inc.
MOORHEAD, Minn., Fargo-Moorhead Insulation Co.
NASHVILLE, Tenn., Reynolds Aluminum Supply Co.
NEWARK, N. J., Eastern Steam Specialty Co.
Robert A. Keasbey Co., Inc.
NEW ORLEANS, La., Eagle Asbestos & Packing Co.
NEW YORK, N. Y., Eastern Steam Specialty Co.
Robert A. Keasbey Co., Inc.
OKLA. CITY, Okla., Ball Distributing & Engineering Co.
OMAHA, Nebr., Cardinal Supply & Mfg. Co.
ORANGE, Conn., Insulation Supply Co.
PADUCAH, Ky., Triangle Insulation Co.
PHILADELPHIA, Pa., John F. Scanlan, Inc.
PHOENIX, Ariz., Williams Insulation Co.
PITTSBURGH, Pa., Dravo Corp., Keystone Div.
PORTLAND, Me., Eastern Glass Co.
PORTLAND, Ore., Western Fibrous Glass Products Co.
RALEIGH, N. C., Reynolds Aluminum Supply Co.
RAPID CITY, S. D., Robbins & Stearns Wholesale
RICHMOND, Va., Reynolds Aluminum Supply Co.
ROANOKE, Va., C. E. Thurston Co.
ROCKFORD, Ill., Mott Brothers Co.
SALT LAKE CITY, Utah, Bullough Asbestos Sup. Co.
SAN ANTONIO, Tex., San Antonio Machine & Supply Co.
SAN DIEGO, Calif., Western Fibrous Glass Products Co.
SAN FRANCISCO, Calif., Western Fibrous Glass Prod. Co.
SAVANNAH, Ga., Reynolds Aluminum Supply Co.
SEATTLE, Wash., Western Fibrous Glass Products Co.
SHREVEPORT, La., Frith Sales Co.
SOMERVILLE, Mass., Insulation Products, Inc.
ST. LOUIS, Mo., Refrigeration Supplies, Inc.
The Stovey Company, Inc.
ST. PAUL, Minn., Asbestos Products, Inc.
SYRACUSE, N. Y., Burnett Process, Inc.
TAMPA, Fla., Eagle Roofing & Art Metal Works, Inc.
TULSA, Okla., Ball Distributing & Engr. Co.
TUPELO, Miss., Paine Supply Co.
WASHINGTON, D. C., Walter E. Campbell Co., Inc.
WEST PALM BEACH, Fla., Southern Metal Prod.
WICHITA, Kans., General Metals, Inc.

G-E Names Dennler, Von Behren to New Executive Posts

W. H. Dennler

W. Von Behren

LOUISVILLE, Ky. — William H. Dennler has been named general manager of the General Electric Co.'s Major Appliance Div., Fred J. Borch, vice president and group executive for G-E's consumer products group, announced recently.

Dennler succeeds William P. Von Behren, who becomes general manager of the household refrigerator department in the Major Appliance Div.

Dennler had previously been general manager of G-E's portable appliance department. He has spent most of his 27 years with the company in the appliance business.

Borch also announced that effective Sept. 1, the name of the company's Housewares Div., will be changed to Housewares and Commercial Equipment Div. Effective that same date, the Hotpoint commercial equipment department will be assigned to the newly-named division and will be renamed the commercial equipment department.

Willard H. Sahloff, vice president and general manager of the Housewares Div. will head up the newly-named division and will serve as acting general manager of the portable appliance department.

Dennler has been with General Electric since 1933. He became manager of the vacuum cleaner division in 1948 and of the portable appliance department in 1951.

Von Behren became associated with General Electric in 1951 as manager-engineering for the Small Appliance Div. In 1954 he was appointed a special consultant for the company's engineering services and subsequently a consultant for the management consultation services.

In 1956, he was named general manager of the radio receiver department, the position he held until his appointment as general manager of the Major Appliance Div. in September, 1959.

Wm. H. Wheeler Dies

POUGHQUAG, N. Y. — William H. Wheeler, 73, founder and president of Airkem, Inc., New York City, manufacturer of air freshening products, died of a heart attack recently.

Laurel Products, Inc. Enters Into Management Contract with Erickson

RIVER FALLS, Wis. — Paul J. Erickson, president of Erickson Industries, Inc., whose main offices are located here, announced that the board of directors of Laurel Products, Inc., Laurel, Miss., had agreed to enter into a management contract with Erickson Industries.

Upon signing of the contract, Paul J. Erickson was elected president of Laurel Products and Richard Shemon, treasurer of Erickson Industries, was elected secretary-treasurer of Laurel Products.

In addition, the following directors were elected at the stockholders' meeting: Paul J. Erickson, Richard Shemon, Henry F. Moody, and Kenneth W. Mackenzie.

Erickson Industries has operated its own factories in River Falls and Roberts, Wis., and Laurel, Miss., for several years. The products manufactured at these facilities are commercial refrigeration items such as upright freezers, farm milk coolers, sectional cooling and freezing rooms, and specialty refrigeration products.

With the addition of Laurel Products facilities in Mississippi there will be a total of 36,000 sq. ft. of productive plant floor space in the Laurel operation.

Laurel Products manufactures central air conditioners and heat pumps for domestic and industrial use, the distribution of which are primarily through their dealers and distributors in the south and southwestern states.

Erickson also stated that Donald W. Carlson of River Falls, Wis. has been appointed superintendent of Laurel Products.

The general administrative offices at Laurel Products will be moved to River Falls, Wis. However, the productive facilities will remain in Laurel under Carlson's supervision.

Paul Erickson said that a management contract is one of the newer concepts of modern business whereby skilled personnel of one company assume management responsibilities of another which provides the experience needed for future planning and growth of the contracting organization.

In this case, the production facilities of Laurel Products are available to augment the Erickson facilities at Laurel while Laurel Products will gain from the knowledge, skill, and experience of Erickson Industries personnel, according to the announcement.

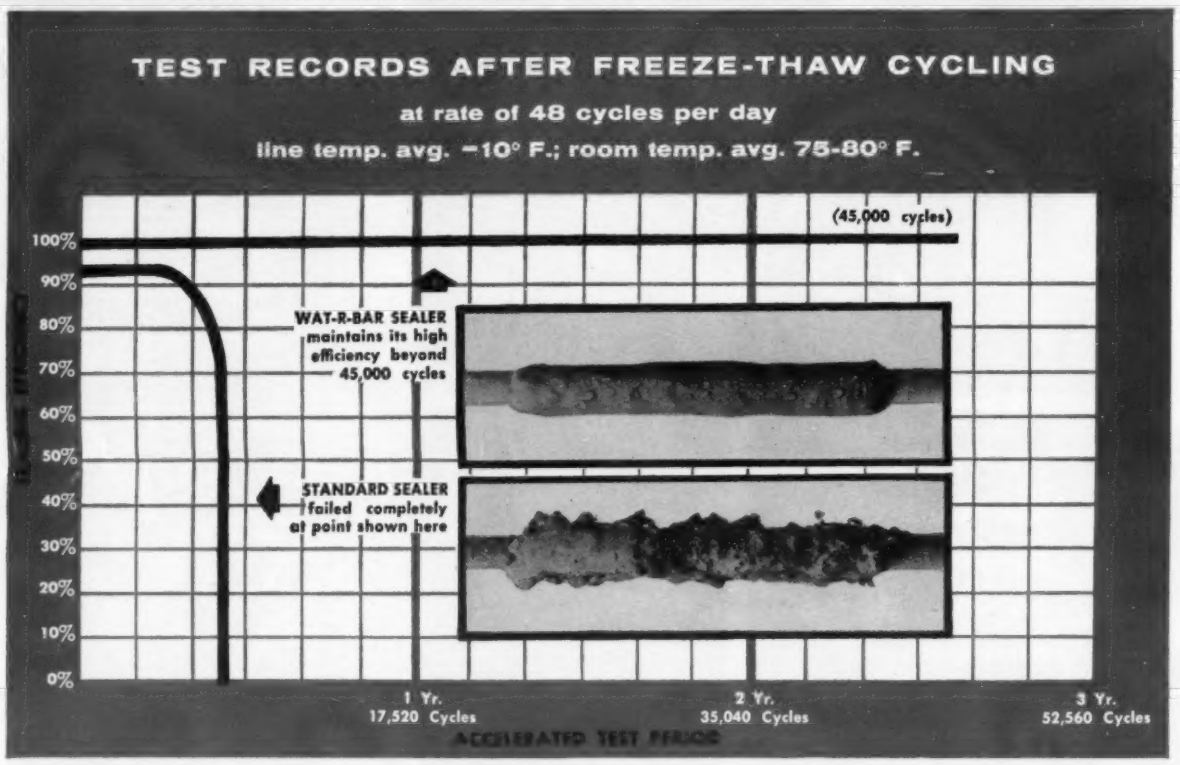
'Air Purifiers'--

(Continued from Page 1, Col. 3)

of the portable type, which create ozone, a substance which is considered toxic in certain concentrations in air in a confined space.

The concern was not with the electrostatic type of air cleaner which in general impart an electrical charge to dust particles which in turn are impinged upon some kind of collecting apparatus. This was pointed out in the story, but was apparently overlooked by some readers.

The story in the Aug. 8 issue "U.S. Seizes 46 Air Cleaners In Cleveland Store" related to something quite different. The cause of action by U.S. officials here was that of an alleged violation of provisions of the Federal Food, Drug & Cosmetic Act. The charge was the labeling of the air filters contained false and misleading statements which suggested the devices are effective treatment for relieving allergy conditions, sinus, hay fever, and asthma, and destroying airborne bacteria and viruses. There was no allegation that the air cleaners involved in this action were in any way harmful to health.



45,000 freeze-thaw cycles and still going strong!

Wat-R-Bar® has this test-rated sealing record

Many years of operation have been capsuled by tests to guide those who want a sealant that keeps on sealing through the years. Our test cycles were one hour in duration—30 minutes freezing, 30 minutes thawing at ambient temperature. Pilot tests proved that shorter cycles were insufficient to tell the true story of the material's resistance to freeze-thaw.

When you specify ***Wat-R-Bar*** you know you have the best. Only with ***Wat-R-Bar*** do you have the time-proved evidence of lasting resistance to water vapor, high humidity, and temperature extremes.

When you seal . . . seal with assurance.

We will be glad to furnish certified proof that *Wat-R-Bar* has completed more than 45,000 freeze-thaw cycles over a three-year period of accelerated tests. Write Dept. R-21.

PRESSTITE SEALING COMPOUNDS

PRESSTITE DIVISION
AMERICAN-MARIETTA COMPANY

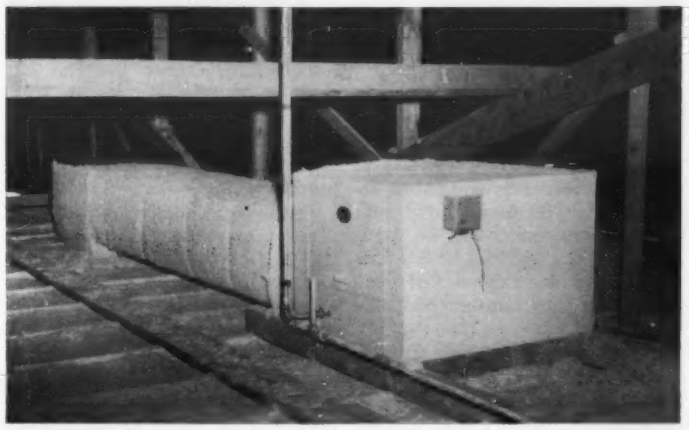
A-M

3774 CHOUTEAU AVE. • ST. LOUIS 10, MO.

6062

Commercial Air Conditioning

Heat Pumps and Straight Cooling Units Air Condition Single-Level Building



AIR HANDLERS were installed inside the roof top in this single-lever commercial building in Phoenix.

* * *

PHOENIX, Ariz. — A combination of all-electric heat pumps and straight cooling units in the 5-ton range was decided upon as the solution to the problem of how best to air condition a large, single-level commercial building here.

The complete installation involved a total of 140 tons of refrigeration—with the condensing sections on the roof and the air handlers between the roof and ceiling.

Designed and manufactured by the refrigeration department of International Metal Products Div., McGraw-Edison Co., under the trade name "Continental," all of the units are air cooled. Since Phoenix is a desert area, the heating load is comparatively light.

In reporting on this installation, International Metal Products commented on the question of central systems versus multiple installations:

"If you were faced with the problem of specifying a large air conditioning load what would be your decision? Would it be one large central unit, or would a combination of several smaller units be the answer?

"After comparing the differences in a multiple installation versus a central system of refrigerated air conditioning it has been shown that in many cases there is an economic point at which a multiple installation gives considerable savings.

"These savings are realized by the elimination of costly ductwork, intricate control systems, and the cost of installing labor is reduced considerably.

"Termed 'zoning,' this type of multiple application has proven very popular on single-story buildings such as bowling alleys, restaurants, factories, and other commercial buildings.

"One of the greatest boons of multiple 'zoned' installations," the company said, "has proven to be the fact that maintenance on one unit has no affect whatsoever on the over-all cooling or heating picture of the building, whereas the shutdown — even temporarily—of one large central system could mean considerable discomfort. Maintenance cost and discomfort therefore is cut to a minimum with this type installation."

PORTION OF ROOF TOP installation of 140 tons of refrigerated air conditioning is shown above. "Continental" air-cooled units manufactured by the refrigeration department of International Metal Products Div., McGraw-Edison Co. were used.

REPRINTS
SELLING FOR PROFIT.
By Frank Klein—Only $1.00 ea. Clip this ad and mail with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort St., Detroit 26, Mich.

Air Conditioned Malls To Join Store to Center

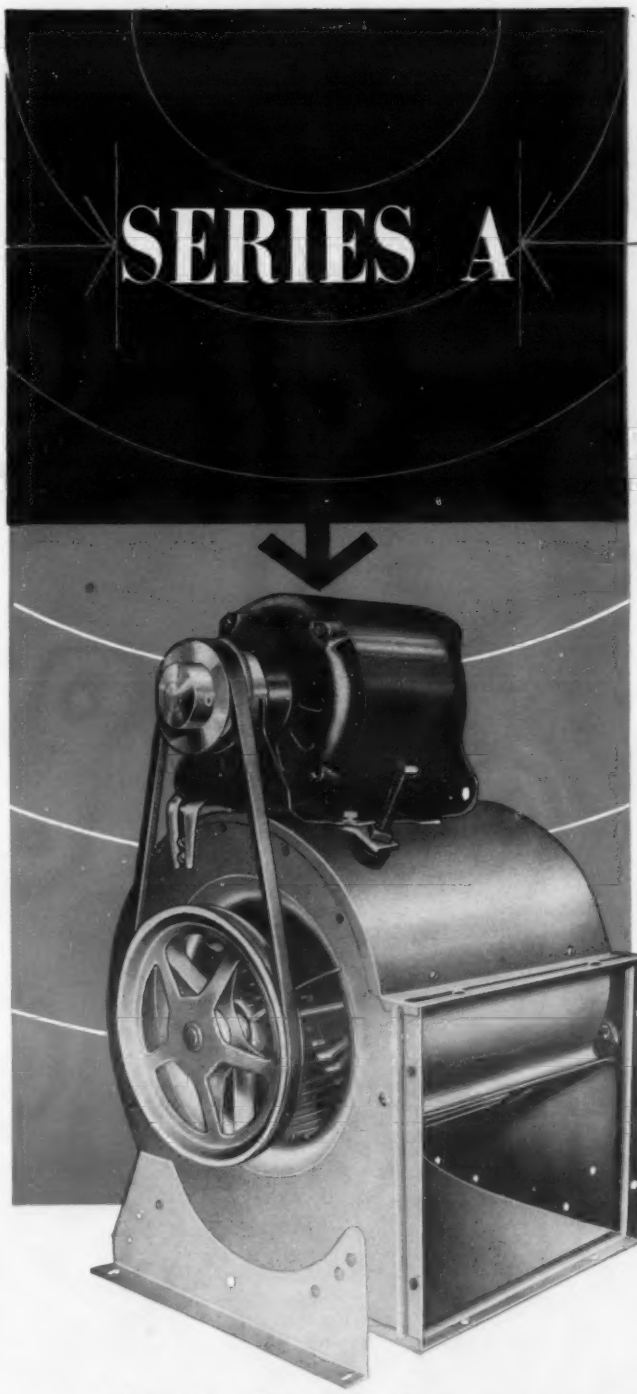
FORT WORTH, Texas — The Fair of Texas, department store and merchandising group, in announcing plans to expand to west Texas, said a 60,000-sq. ft. suburban store will be built in the $3 million-plus Vonway Shopping Center in northeast Odessa.

The store will be connected with the remainder of the center by climate-controlled shoppers' malls, it was pointed out.

Two Heat Pumps Keep Congregation Comfortable

DUNEDIN, Fla. — The new Grace Lutheran church here provides for the comfort of its congregation with two 7½-ton and one 5-ton Worthington heat pumps, it was reported by Florida Power Co.

Heat pump contractor on the job was Y-B Refrigeration & Air Conditioning Co., Inc., Clearwater. Architect was William B. Harvard, St. Petersburg; engineer, Healy & Latimer, St. Petersburg; and general contractor, Bailey Builders, Inc., Largo.



"Features exclusive LAU FIRSTS"

Here's the most versatile blower manufactured today! The Lau Series A is extremely efficient in many applications because of its availability in such a complete performance range. Assorted wheel sizes, four standard discharge positions, and a wide selection of C.F.M. characteristics mean you can specify a blower that's practically custom made for you . . . at no extra cost.

Standard Series A features include such Lau exclusives as Preslok® wheels, ground and burnished shafting, Lau Pak Gold Seal bearings, tripod bearing brackets, heavy gauge housing supports, versatile motor mounts, and Lausteel pulleys.

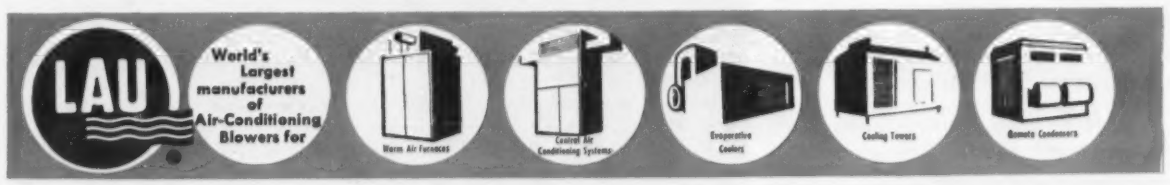
Series A blower assemblies are recommended for warm air furnaces, central air conditioning systems, evaporative coolers, cooling towers, and remote condensers.

Write or call Lau today. We will place you in contact with your experienced Lau Sales Engineer. He's always nearby and ready to help you solve any air moving problem.

MEMBER INDOOR COMFORT

The Lau Blower Company, 2027 Home Avenue, Dayton 7, Ohio.

Other plants in Kitchener, Ont., Can., and Irwindale, Calif.



World Trade Notes

MEXICO CITY, Mexico — To speed up this country's industrialization and enhance its international credit, the government of Mexico has paid off all foreign debts totaling $36,160,000. Some of the debts dated back to 1823.

Mexico this year is celebrating the 150th anniversary of its independence movement and the 50th anniversary of the revolution that laid the basis for modern Mexico.

●

ACCRA, Ghana — "Whatever changes there might be in the future in the national status of Ghana, all financial obligations entered into by her will be fully honored by Ghanaians and their government," Finance Minister K. A. Ghedemah assured foreign investors just before Ghana became a republic on July 1.

●

NEW YORK CITY—The British Exposition staged here last June, largest of its kind ever held abroad by Britain, drew well over 300,000 visitors and 20,000 buyers, Sir Norman Kipping, chairman of the exhibition's executive committee, reported.

"From a trade point of view," Sir Norman said, "many exhibitors have been surprised by the number of serious inquiries reaching them from quite new contacts. Several are sending men out for extended periods just to follow them up."

●

GENEVA, Switzerland—Since the beginning of 1959, more than 100 United States firms have established overseas headquarters in this country. There are more than 300 American firms represented here.

Big lure, in addition to central location for the European market, is low corporate profit taxes, estimated at less than 10%.

●

WASHINGTON, D. C. — At the end of 1959, United States private investments in physical facilities abroad totaled $29 billion, the U. S. Dept. of Commerce reports. Ten years ago the total was less than $12 billion.

During 1959, new private investment abroad totaled $1.2 billion, up from $1.1 billion in 1958. Investors spent $427 millions in Canada, $439 million in Western Europe, $193 million in Latin America, and $145 million in other areas.

●

NEW YORK CITY—The International Ladies Garment Workers Union is the first American union to get an employer to set up a fund to protect his employes against loss of job or wages as a result of competition from the company's overseas plant.

To settle a strike called by ILGWU, the Kenrose Mfg. Co. agreed to pay 30 cents into a special fund for every dozen dresses shipped to the United States from its new factory in Cork, Ireland. The agreement does not cover dresses exported from Ireland to other countries.

Union representative said the union had no objection to the company increasing total production through its Irish plant, but was concerned that the company should not avail itself of low labor cost in Ireland at the expense of Virginia workers.

Trying to find the right man for a hard-to-fill vacancy—the NEWS' Classified Ads are read by your man.

Place your ad today!

'Miracle Kitchen' Pays Second Visit Behind Iron Curtain

ST. JOSEPH, Mich. — Whirlpool Corp.'s "Miracle Kitchen" is making its second visit behind the Iron Curtain this summer at international trade fair exhibitions in Poland and Yugoslavia.

This "kitchen of the future," which was seen by millions of Russian people while part of the American National Exhibition last summer in Moscow, was exhibited at a fair in Poznan, Poland, from June 12 to 16, and will be shown in Zagreb, Yugoslavia, from September 1 to 25.

Premier showing of the kitchen was at the U. S. Exhibit in Milan, Italy, in 1958.

The air conditioned Miracle Kitchen includes such futuristic appliances as a self-propelled serving and dishwasher cart, an automatic floor cleaner, and a refrigerator which adjusts to convenient reach-in level "at a wave of a hand."

Iowa Group Considering Export Seminar

CEDAR RAPIDS, Iowa — If enough interest is indicated by state industrial firms, an export promotion seminar will be sponsored in the early fall by the foreign trade bureau of the Cedar Rapids Chamber of Commerce.

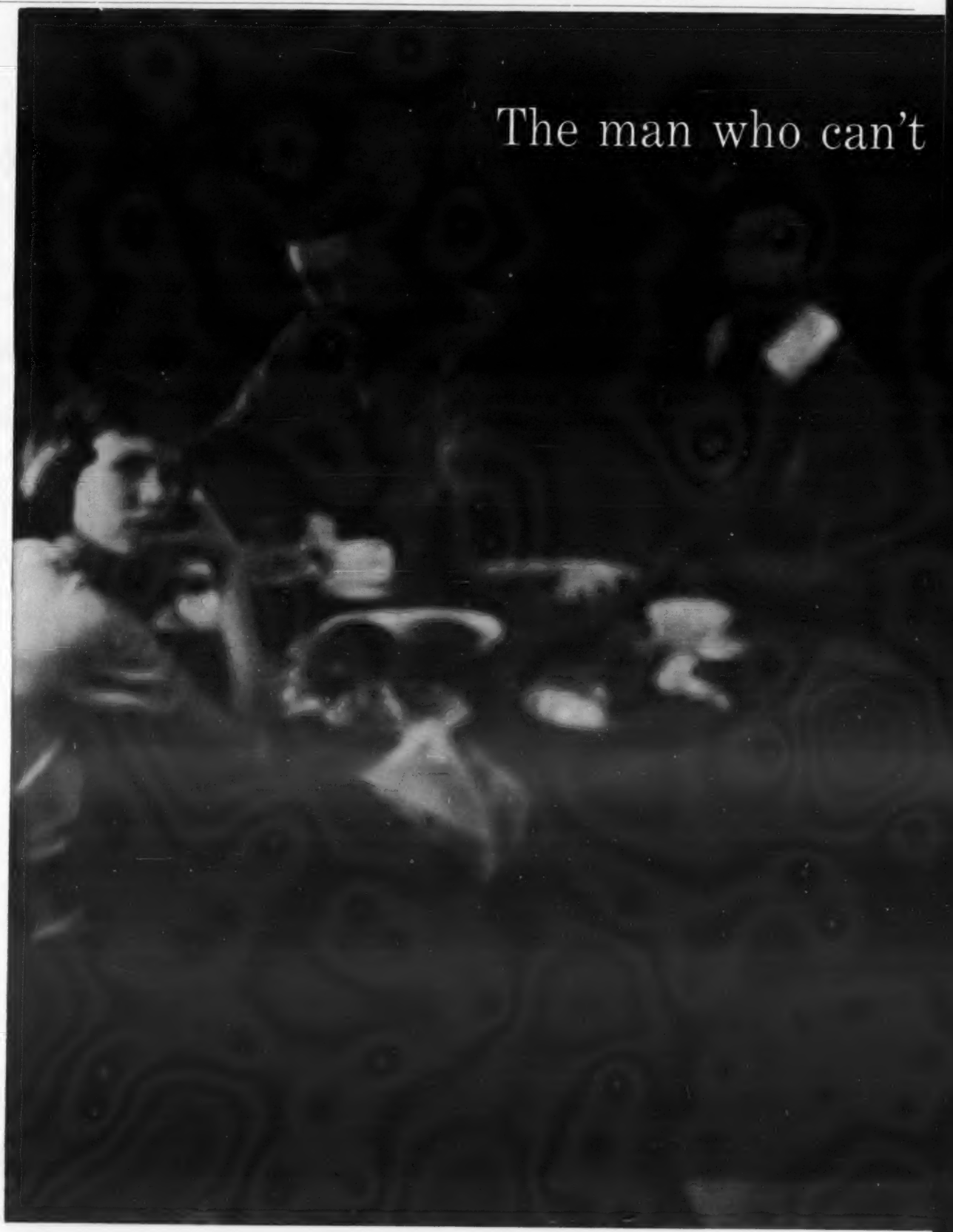
T. A. Parks of Amana Refrigeration, Inc. is chairman of the bureau. The seminar would cover export sales, credit, financing, insurance, and packaging discussions by specialists, according to the announcement.

Canadian Firm Will License Iranian Refrigerator Assembler

WASHINGTON, D. C. — A licensing and technical assistance agreement with a Canadian manufacturer for the assembly of refrigerators in Iran has been concluded by an Iranian firm, according to the Business & Defense Services Administration.

Stamping, enameling, and assembly machines are being installed at the factory site in western Tehran. Production of refrigerators is expected to begin in six months with an annual output of 30,000 units.

The firm plans to make freezers at a later date. All stampings will be made at the plant; however, other components will be imported, largely from Canada.



NAPC Proposes That Contractors List Qualifications Before Awards Are Let

CLEVELAND — Both customers and the industry would be better off if qualifications of mechanical contractors could be established before awarding contracts, believes the National Association of Plumbing Contractors.

RESOLUTION ADOPTED

A resolution towards this end was adopted at the association's recent 78th annual convention here.

Specifically, the resolution would have NAPC develop "the best contractor prequalification questionnaire form possible" which would then be made "available to all architects" and the architects would "be encouraged to use the form consistently in the selection of mechanical contractors."

The form illustrated herewith was offered in the resolution merely as a suggestion.

"It would be a distinct service to the owner and an advantage to the architect if well qualified mechanical contractors bid for and execute mechanical contracts," said the resolution in part.

"All parties would be better served if the mechanical contractors were required to produce evidence of their qualifications before the letting or award of contracts; and such practice would encourage more responsible mechanical contractors to bid on projects; and

"The financial mortality in the industry should be substantially reduced if mechanical contracts were awarded to mechanical contractors with experience and ability on the particular type of project involved," the resolution also stated.

SUGGESTED FORM

The sample form suggested would require the mechanical contractor to list such things as age of the firm, past construction work similar to job under bid, present contracts, any failure to complete a contract, any litigation involving work performed, references by banks, vendors, and customers.

The contractor would also describe his plant and list his major tools, qualifications of key personnel, provide written evidence of bonding and credit capacity, attach a financial statement, and have the whole form notarized.

BIDDER QUALIFICATIONS

Project _____ Division of Work _____

Name of Bidder Applicant _____
Address _____

(1) General Contractor ☐ Mechanical Contractor ☐ Electrical Contractor ☐ _____ ☐
(2) Corporation ☐ Partnership ☐ Individual ☐ _____ ☐
(3) Names of Individual, Partners or Officers:
(1) _____ (2) _____ (3) _____
(4) When was your Company organized? _____ Where? _____
(5) How long have you been engaged in the Contracting category indicated? _____

(6) Indicate your experience in construction work similar in size, type and importance to this project:

Year	Project	Location	Cost
			$

(7) List present Contracts and percentage of completion:

Project Name	Contract Amt.	% Complete	Balance
			$
TOTAL			

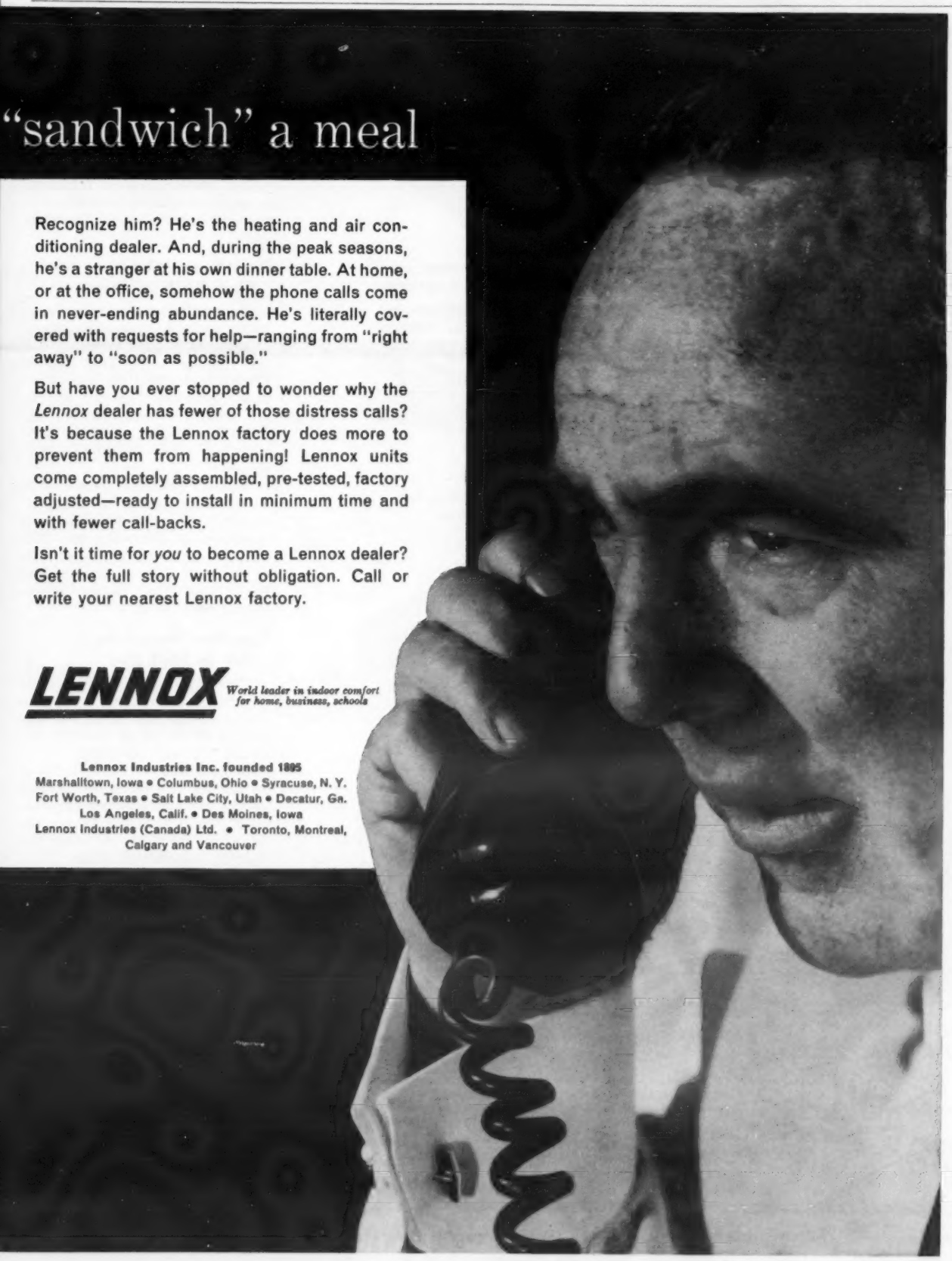
(8) Have you ever failed to complete any work awarded to you? If so, where and why? _____

(9) Have you ever been engaged in litigation with respect to any work performed by you? Explain fully _____

(10) Why do you think you are qualified to perform the work category indicated on this project? _____

SUGGESTED Bidder Qualification form shown above was included with the NAPC resolution merely as a guide for further development.

* * *


"sandwich" a meal
Recognize him? He's the heating and air conditioning dealer. And, during the peak seasons, he's a stranger at his own dinner table. At home, or at the office, somehow the phone calls come in never-ending abundance. He's literally covered with requests for help—ranging from "right away" to "soon as possible."
But have you ever stopped to wonder why the *Lennox* dealer has fewer of those distress calls? It's because the Lennox factory does more to prevent them from happening! Lennox units come completely assembled, pre-tested, factory adjusted—ready to install in minimum time and with fewer call-backs.
Isn't it time for *you* to become a Lennox dealer? Get the full story without obligation. Call or write your nearest Lennox factory.
LENNOX
World leader in indoor comfort for home, business, schools
Lennox Industries Inc. founded 1895
Marshalltown, Iowa • Columbus, Ohio • Syracuse, N. Y.
Fort Worth, Texas • Salt Lake City, Utah • Decatur, Ga.
Los Angeles, Calif. • Des Moines, Iowa
Lennox Industries (Canada) Ltd. • Toronto, Montreal, Calgary and Vancouver

AAF Announces 3 Managerial Changes

LOUISVILLE, Ky. — Three managerial changes have been announced by American Air Filter Co., Inc.

Charles S. Stock has been appointed manager of central marketing, responsible for the formulation, development, and coordination of the over-all policies, objectives, and programs for marketing all AAF's products.

Succeeding Stock as manager of the School Air Systems Div. is Frank K. Platt, formerly assistant to the manager. SAS Div. markets Herman Nelson unit ventilators and Kennard/Nelson heating, ventilating, and air conditioning products for school classrooms and other educational installations.

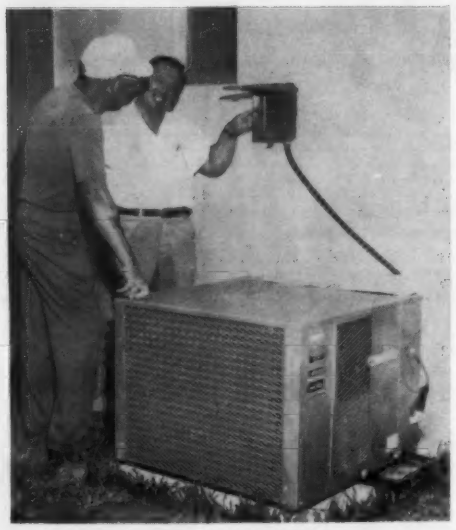
At the same time, A. B. Ullrich, Jr., has been named manager of Engineered Air Systems Div., which markets Kennard/Nelson industrial and commercial heating, ventilating, and air conditioning products.

May Distributor Sales 16% Ahead of Last Year

WASHINGTON, D. C.—May sales of air conditioning and commercial refrigeration equipment distributors were 16% ahead of May, 1959, and 9% better than April, according to the Bureau of the Census. Their sales for the first five months of 1960 gained 24% compared with the like period of 1959.

Sales of plumbing and heating equipment and supplies distributors in May topped the previous May by 4% and April by 10%. First-five-month sales were up 2% from the corresponding year-ago period.

$11,950 Florida Homes Have Heat Pumps



BUILDER TIMMONS gets instruction from air conditioning contractor, Casey Vandervliet, on an American-Standard heat pump unit installed on one of Timmons homes.

Design House Specifically To Accommodate American Standard Unit

CLEARWATER, Fla.—Year-round air conditioning, via a heat pump, is being offered by Timmons Homes here in a two-bedroom home that sells for $11,950, including lot.

This is said to be made possible by close cooperation between builder and air conditioning contractor combined with detailed planning and building "know-how." And it's reportedly accomplished by specifically designing and building homes to accommodate American - Standard heat pumps.

By using this method of planned construction, Timmons slashes material and installation costs of central air conditioning to the point that there is only $450 difference between the selling price of the completely air conditioned home and the home without the heat pump.

But the buyer-appeal of central air conditioning is so compelling that two speculative homes, built without the central unit, have remained unsold for months, while the sale of the fully air conditioned homes averages one per week.

RALPH ILLING, left, and W. L. Timmons check prints in front of huge sign directing people to their air conditioned model home.

* * *

Orders to build seven homes containing the heat pumps were obtained the first two weeks the air conditioned model went on display.

Credit for selling the builders of Timmons Homes on the feasability and sales advantages of a low-priced home with central air conditioning and heating goes to Casey Vandervliet and Bob Peters, partnership-owners of Banner Heating & Air Conditioning, franchised dealer for American - Standard in Largo, Fla., a suburb of Clearwater.

Detailed planning convinced the builders that they could redesign their home to facilitate substantial efficiency or quality, and without increasing building costs.

Duct Space Makes Shoe Rack In Closet

The revised plans call for a 10-in. space between the inside closet area of back bedroom and the outside wall. The builder allows this space to accommodate ductwork for the supply air from the unit. Return air ducts run under a built-in shoe rack in the same bedroom closet.

Another change provides a 14-in. drop ceiling in the central hall. This permits use of a minimum of ductwork and outlets, yet still places a vent hole in each of the bedrooms, the bath, and the living room-dining room area.

Two Men Rough In Job In Half Day

This pre-planning and special design enables two men to rough in the job in half a day and to finish off in another two hours," it was reported.

Willingness of the builders to act on the recommendations of the air conditioning contractors is said to result in savings of close to $100 on each job just on installation alone.

Placement of the 2-ton heat pump unit is on a 30 by 36-in. cement slab outside the house and against the back wall. The slab is poured separately to prevent vibration inside the house when the unit is in operation.

To reduce costs and speed production, Banner Heating switched from buying pre-fab ductwork to its own fabricating equipment. Savings on materials for the Timmons homes result from tapering the duct from 24 by 8 to 16 by 8 and back up to 18 by 6 at the outlet.

Features designed to help assure efficient heat pump operation are full insulation, including 4 to 6 in. of glass fiber

ALCO'S famous 402
THERMO® VALVES
The Small-Fixture Valve For All Fixtures

NOW AVAILABLE 2 WAYS

- With BUILT-IN PRESSURE LIMITING ELEMENT—to prevent motor overloading and motor burn-out—denoted by the letters P.L. as #402-2F-PL
- Without BUILT-IN PRESSURE LIMITING ELEMENT—for installations not requiring protection against motor overload—denoted as #402-2F

ACTUAL SIZE

Field proven models for all these capacities:
REFRIGERANT-12
¼, ½ and 1 Ton
REFRIGERANT-22
½, ¾ and 1 ½ Ton
REFRIGERANT-40
½, 1 and 2 Tons

These are your benefits
√ LIQUID CHARGE—Install in any position.
√ WIDE RANGE SUPERHEAT ADJUSTMENT—2 to 20° F—Easy External adjustment fits Standard Service Wrench.
√ REVERSE SEATING—Assures smooth feed at all loads.
√ RUGGED CONSTRUCTION — Brass, Bronze and Stainless Steel.
√ REMOVABLE STRAINER—At inlet—Easy to clean.
√ CAPILLARY AT SIDE—Allows more head room for mounting.

IF THERE'S ROOM FOR YOUR HAND . . . THERE'S ROOM FOR AN ALCO 402

Call your Alco wholesaler—Write for Specifications

• *BUY SECURITY*
• *BUY QUALITY*
• *BUY ALCO*

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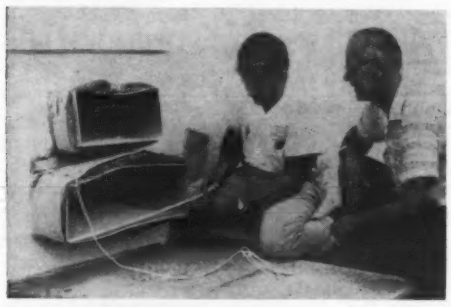
ALCO VALVE CO.
853 KINGSLAND AVE. • ST. LOUIS 5, MO.

The one complete line of refrigerant controls: Thermostatic Expansion Valves • Refrigerant Distributors Solenoid Valves • Suction Line Regulators • Flooded Evaporator Controls and Reversing Valves



ANOTHER TIMMONS home is about ready for installation of the heat pump unit. Bob Peters, Banner Heating & Air Conditioning, checks ducts on outside of house as Ralph Illing looks on.

STANDING in the living room, Timmons shows the drop ceiling of the central hall and one of four side-wall outlets of the central system installed in his homes. The drop ceiling was one of the changes incorporated when Timmons re-designed his homes to accommodate the central system at a minimum cost in materials and labor. Return air duct is on right in the background.

on the ceilings, white tile roofs, and controlled use of glassed-in areas.

Expense of running the unit in the model home stays under $10 per month, and this is on a 24-hour schedule every day during the summer, it is claimed.

Thermostat in the model is kept at 72° F., six degrees under recommended temperature. This cooler temperature impresses prospects with the contrast between outside summer heat and the refreshing coolness inside the model home.

Supplemental Heat Provided In Winter

In winter, supplemental electric heat is provided by a 4 kw. strip heater in the supply air duct. When outside temperature drops below thermostat setting, this heater automatically turns on.

Inside controls can be set for either heating or cooling, or the thermostat can be regulated to maintain a given temperature utilizing both the heating and cooling cycles as necessary.

While W. L. Timmons and Rudolph Illing, co-owners of Timmons Homes, build homes from $11,950 to $17,000, they specialize in compact, low-priced homes for retired persons.

The promotional, air conditioned home at $11,950 contains 840 sq. ft. of inside living area plus a 12 by 24-ft. garage and a 10 by 10-ft. patio.

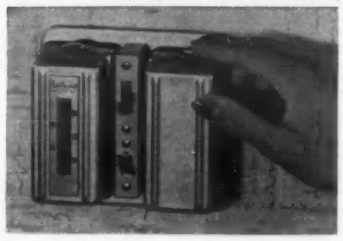
Other features included in the price are complete "Formica" kitchen cabinets, built-in "Formica" china cabinet, built-in range, front and side lawns sodded, concrete driveway, and an all-electric Medallion rating.

Homes are sold on conventional financing, and lending institutions look with favor on central heating and air conditioning. Houses with the units require only $90 more down payment than those without the system. Monthly payments run $2.73 higher.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Automatically Lowers Dry-Bulb Temp.

'Effective Temperature Controller' Said To Compensate for Humidity Rise



DAYTON — Chrysler Corp.'s Airtemp Div. announced that it has developed an "Effective Temperature Controller" which automatically compensates for humidity rise by lowering the dry-bulb temperature.

The controller was developed by Jack C. Davidson, manager of application engineering.

The Effective Temperature Controller solves a common problem which occurs in residential air conditioning," the announcement said. "In mild weather or at night, the unit does not run enough to keep the humidity down to a comfortable level, requiring most users to manually lower the thermostat setting when they notice a stuffiness in the home.

"Chrysler air conditioning units will now offer the Controller which combines a thermostat and humidistat and automatically solves the problem.

"The humidistat registers any humidity rise and closes a circuit to the thermostat which contains an auxiliary heater. The heater, comprised of a small resistor, adds artificial heat in the vicinity of the bi-metal sensing element.

"This, in effect, fools the thermostat which begin compressor operation as if the thermostat setting were two or three degrees below its setting. If the thermostat is set to hold 78° in the space and the humidity rises, the humidistat will cause the control point of the thermostat to drop approximately to 76°.

"This drop will lengthen the operating cycles of the equipment and thereby lower the humidity and produce a healthy, comfortable atmosphere in the conditioned space."

Chrysler now offers the Effective Temperature Controller with its straight cooling thermostat but plans to market the Controller with all of its thermostats in the near future.

Top refrigeration people depend on top tubing people!

Comprehensive GM Steel Tubing facilities quickly deliver your tubing processed to slip into your production line like an eel through oil. Typical are facilities for end-processing tubing to your requirements. We can hold O.D. or I.D. tolerances to a plus or minus .0015″ by end sizing. And by swaging, your O.D. tolerances can be held as close as plus or minus .002″. You can have external beading or recessing and we can rod draw to exceptionally close tolerances. Shearing, upsetting, flattening, piercing—we do all of them expertly. Just ask a GM Steel Tubing Specialist. We're at your service. *Rochester Products Division of General Motors, Rochester, New York.*

GM STEEL TUBING
BY ROCHESTER PRODUCTS

AMERICA'S LARGEST MANUFACTURER OF REFRIGERATION TUBING

Inside Dope

By GEORGE F. TAUBENECK

(Continued from Page 1)

the company, the industry, the job, and the man's length of service in that position reasonably well.

What They Really Meant

Cynics who've read dozens of position-seeking "recommendations" down through the years might translate standard sentences thusly:

"He's a consistently good team worker." (Hasn't had an original thought in 20 years.)

"He's always staunch in supporting his superior's recommendations." (A yes man.)

"A strong seller who really promotes his ideas." (Big mouth in committee meetings who doesn't know the score.)

"Conscientious? I can't tell you how many times I've seen him take his briefcase home." (He can't get organized.)

"He's volunteered to serve on most of our management committees." (Afraid to make his own decisions.)

"He's at his best when handling the broad outlines of a situation and delegating the details." (He can't get loyalty from assistants, because they know he'll pass the buck.)

"A great believer in face-to-face communications, rather than memos and reports." (He can't spell.)

"He had good command of the job, considering his age." (Too young to cut the mustard.)

"I believe he's thinking in terms of $25,000." (He'll jump at the chance for $10,000.)

"I'm sure you'll find him capable of handling any job you have in mind." (We're glad to get rid of him.)

Buttered-up Butter

Old-fashioned American ingenuity was evidenced by a North Carolina couple recently.

When the milk cooling equipment on their dairy farm broke down, cleverly they made butter from their mounting supply of milk.

Mrs. Alex Bakan, who (with her husband) operates the Bakan Dairy Farm at Burgaw, N. C., reports that "Operation Butter" went into effect when they were faced with the daily disposition of 100 gals. of not-cooled, unacceptable milk.

Appalled at the possible total loss, Mrs. Bakan decided to make butter from cream taken off that unrefrigerated milk.

Facetiously she suggested to her husband that her automatic washer was large enough to do the job.

"Why not?" he agreed. So they cleaned and scalded the washer, inserted the cream, and began making butter.

Only the washer's "wash-cycle" was employed. It was shut off just before entering the spin cycle. Each time the butter was dipped out.

This process worked so well that the Bakans continued this unusual butter production until their cooler was repaired.

"We ended up with 486 packages of delicious butter in our freezer," she reports.

The Whirlpool performed admirably as a butter churn, required no follow-up service or repairs, and once again capably is doing the laundry chores it was designed and built for originally.

How To Grow Lean

Next to the scandalous doings of somebody else, nothing excites a woman so much as a new diet.

Subscriber A. Nonny Moose suggests this handy-dandy Little Daisy:

Monday. Breakfast — weak tea. Lunch—one bouillon cube in ½ cup diluted water. Dinner—one pigeon thigh and 3 oz. juice (prune, gargle only).

Tuesday. Breakfast—scraped crumbs from burnt toast. Lunch—doughtnut hole (without sugar) and one glass dehydrated water. Dinner — canary eyebrows stewed (fat removed).

Wednesday. Breakfast — boiled-out stains from children's table cloth. Lunch—½ dozen poppy seeds. Dinner—bees knees and mosquito knuckles sauted with vinegar.

Thursday. Breakfast — shredded egg-shell skin. Lunch—belly-button from a navel orange. Dinner—three eyes from small Irish potato (diced).

Friday. Breakfast — four chopped banana seeds. Lunch—broiled butterfly liver. Dinner—fillet of soft shell crab claw.

Saturday. Breakfast — two lobster antennae. Lunch — one guppy fin. Dinner—jelly-fish vertebrae, strained.

SUNDAY (jackpot!) Breakfast — pickled hummingbird tongue. Lunch—prime ribs of tadpole. Dinner—tossed paprika and clover leaf salad. All meals are to be eaten under microscope to avoid extra portions.

Following Monday: the funeral.

Quotes of the Week

Much has been said about the loneliness of the writer and, to tell the truth, it is a task that depends on solitude. Most businesses and many professions thrive on good company, but the writer asks people to be quiet, asks to be left alone, asks not to be called to the telephone. —JOHN CHEEVER.

Add Boners

Queen's Pregnancy Revives Old Custom — *Knoxville News-Sentinel.*

Cleona Man's Amusement Devices Held.—*Lancaster Journal.*

Lord to Seek Second Term.—*St. Paul Pioneer Press.*

Last Laughs

Socialists should be reminded that there's always free cheese in a mouse trap.

Sixty-year-old widower had announced he was going to marry a girl young enough to be his granddaughter.

Over the dominoes table at the Union League Club an old crony remonstrated against the very idea of a May-December marriage.

"December could find in May the loveliness of springtime," he poesied. "That I'll grant you. But what can May find in December?"

"Christmas," grinned another old codger, comfortably patting his fat wallet.

How to please everybody . . . well almost!

It's a cinch you can't please *all* users of centrifugal pumps with *any* single line of pumps. But the TACO "LP" does give an awful lot of heating engineers precisely the pump performance they need.

The reason is *extras* . . . extra design features which make an "LP" more versatile, more efficient, more dependable. For example, it's available close-coupled or base-mounted . . . with sleeve or ball bearing frame . . . extra quiet motor . . . mechanical seals or stuffing boxes. It's an *advanced-design* pump too . . . with self-venting centerline discharge . . . casings adaptable to horizontal discharge. And . . . it's a *top quality* pump . . . with stainless steel shaft sleeves . . . oil slinger lubrication . . . permanently located throttle bushing.

For *your* next installation, pick your pump from the line with the extras . . . "LP". TACO also manufactures a line of high head pumps and circulators. Write TACO HEATERS, INCORPORATED, 1160 Cranston St., Cranston 9, Rhode Island.

TACO

SERVING THE HYDRONIC INDUSTRY SINCE 1920

Why Architects, Engineers Shun Salesmen (2)

WHY ARE MANY architects, engineers, professional people so often hard to reach by a manufacturer's representative? How can the manufacturer improve his field relationships with such professionals?

In this issue, Kenneth M. Wilson, co-owner of E. F. Klingler & Associates, Inc., Eau Claire, Wis., continues his discussion of such questions from the viewpoint of the professional. Wilson, who is the author of numerous papers on the non-technical side of engineering and architectural practice, presented these thoughts before a recent Architectural Sales Representative Institute at Ohio State university.

By Kenneth M. Wilson

E. F. Klingler & Associates, Inc., Eau Claire, Wis.

Accessibility of factual information brings up the second of our criteria in the area of product promotion.

Some time ago, I had occasion to examine data on a small heating boiler that was proposed for approval on one of our projects. A twinge of intuition or apprehension encroached on my mind as I checked the manufacturer's published rating, firing rate, and dimensional data, and accordingly, I dug into the matter a bit deeper than usual before ruling on its acceptance or rejection.

I applied some established basic formulas on the rates of heating surface, furnace volume, flue gas travel to substantiate the published rating, and as a result arrived at a theoretical rating of over 25% less than that published in the submitted data.

I then telephoned the engineering department of the manufacturer, and after several futile attempts to evade my question, I was told that the manufacturer deliberately overrated his product because, they told me, it was an established fact that most professional designers included such a liberal safety factor in their computations that the manufacturer's over-rating of their product made everything come out just right in the end.

If we were to accept as fact that assumption that every engineer puts a 30% factor of ignorance into his computation which in turn, forces a manufacturer into either over-rating or under-rating his product, it is only another way of saying that to be right once, we must be wrong twice.

Association Certified Ratings Valued Highly

In this vein, we have often been asked what value we place on certified ratings by manufacturers' associations and independent laboratories. These are highly important to us and at present are the only ratings we can accept at face value.

However, you must bear in mind that, as a rule, such certified ratings are usually not available until nearly a year after a new product makes its appearance on the market. It is ironical that we must wait this long to find out if, and how far, we are being led afield. How much better for all concerned if, with a clear conscience, we could accept manufacturers' ratings at face value.

Engineers and architects must have, from one source or another, completely factual information on every product they specify. It must be concise, accurate, well-arranged, and presented in such a way that normally used design capacity and dimensional information, plus brief outline guide specifications can be picked out without wading through mountains of non-essential or seldom used information and data.

I know of one specific instance of comparison on this score. One very well known manufacturer of heating and ventilating equipment has assembled his presentation of his line of classroom unit ventilation into a single 8-in. by 11-in. bulletin of 55 pages. In these 55 pages, every bit of information on the product, accessories, capacity, application, and performance that could possibly be utilized for any but the most unusual application can be found at once.

Another manufacturer, equally well known, presents a competitive product, which so far as I can determine is as nearly equal to the first as is physically possible, but he utilizes an expansible, hard-board binder, nearly 3 in. thick and containing well over 400 pages to present the same story. You need only one guess to know whose product appears most frequently in our specifications.

To sum up our criticism of manufacturers' publications which flood our mails and confuse our engineers, I can only echo the words of J. Stewart Stein, president of the Construction Specifications Institute, when he said:

"I long for the day when manufacturers will have the pipe dreams of their advertising agencies monitored by qualified, well-trained, technical personnel before they are foisted upon the already over-crowded schedule of busy architects and engineers."

A third point which contributes to the sometimes frosty atmosphere with which you are greeted is the fact that far too many of you know far too little about the product you are trying to sell.

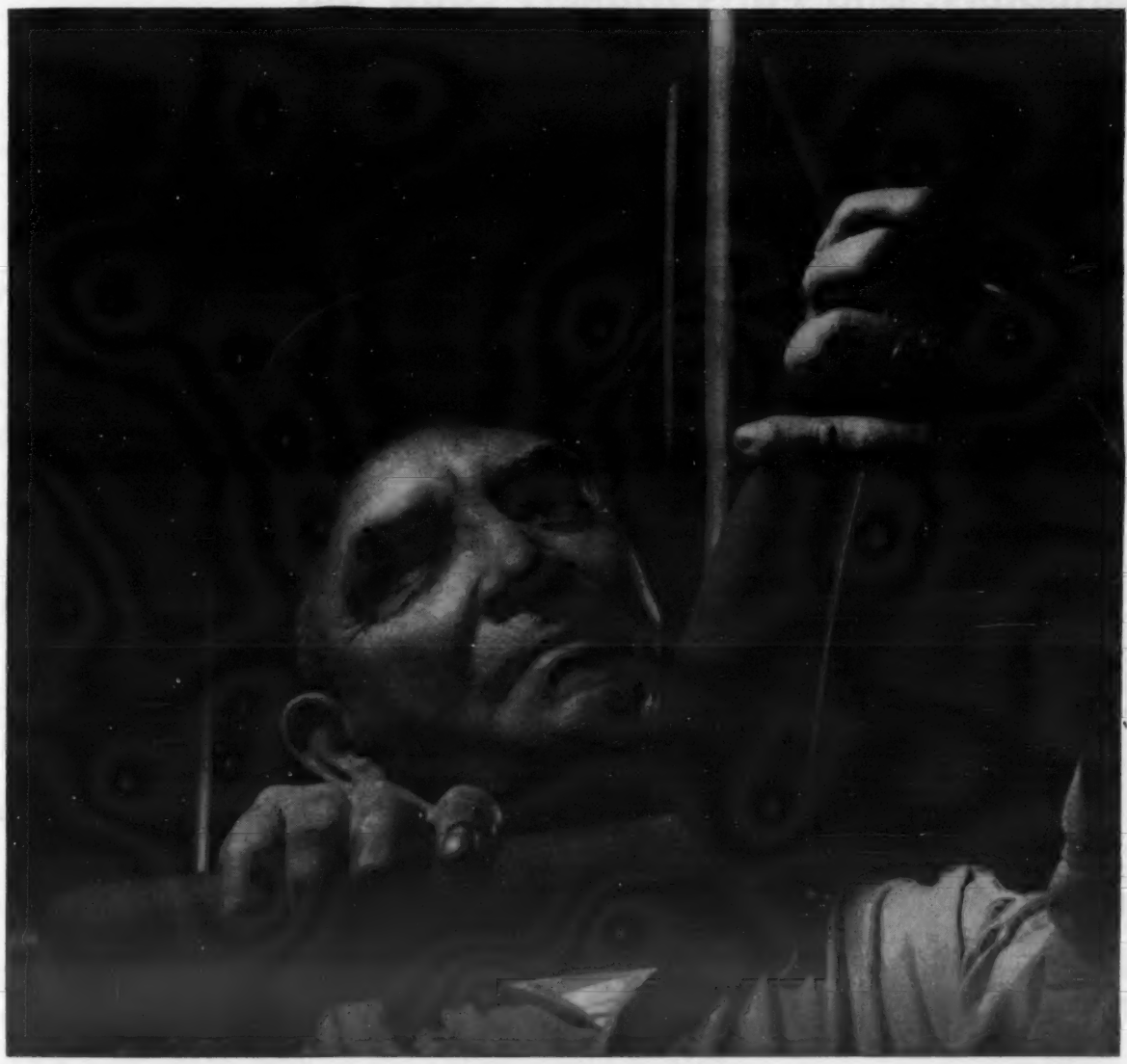
Key Qualities of Sales Representative

A successful sales representative always has two key characteristics. First of all, he must be so completely sold on his own product that he is enthusiastic. He is completely convinced that dollar for dollar it represents the best buy on the market for the job it was designed to accomplish.

Second of all, and most important, he knows exactly what that job is. If you are going to represent your parent organization to me, then to me you must be almost a final authority on what your product is, what it can do, how it can be applied, and particularly, how it must not be applied.

I expect a representative to instantly answer any reasonable question I may ask about his product.

(To Be Continued)



Less time spent elbow-bending on the job

B.F.GOODRICH INSULATION TUBING CUTS IN HALF LABOR COSTS FOR INSULATING PIPE

It's as easy as slicing bread to cut elbows out of BFG insulation tubing—a sharp knife and a miter box are all you need. Parts cement together in seconds. Straight runs go on faster, too. If pipes are already connected, it can be slit, snapped on and cemented in half the time it usually takes for other methods of insulation. Slitting is unnecessary for new lines—it quickly slips on straight or bent pipe as easily as a ring on your finger.

B.F.Goodrich tubing is made of a tough, flexible rubber with millions of uniform, non-connecting cells that seal out air and moisture. It can be used for insulating pipes carrying hot or cold liquids at temperatures ranging from −20°F to 200°F. It's clean, easy to work with—doesn't rub off, chip or crumble. It comes in 6-foot lengths in many wall thicknesses that are easy to handle, easy to store. This BFG insulation is also self-extinguishing, so it can be installed on copper tubing before sweat fittings are made—tubing is merely pushed back and held by clamps while joint is soldered.

Try this labor-saving insulation on your next job. For full information on B.F.Goodrich insulation tubing, call your B.F.Goodrich distributor, or contact *The B.F.Goodrich Company, 180 Derby Place, Shelton, Connecticut.*

INSULATION TUBING BY B.F.Goodrich

They'll Do It Every Time

by Jimmy Hatlo

BIGDOME POURED OUT A TIRADE IN A LETTER TO ANOTHER TYCOON ABOUT ANSWERING LETTERS PRONTO....
TO POULTICE AND COMPANY--"GENTLEMEN: TEN DAYS AGO I WROTE TO YOU FOR A QUOTATION ON TWO-WAY DOORSTOPS, AND HAVE HAD NO REPLY--PERHAPS IN THE FUTURE WE SHOULD DEAL WITH A FIRM THAT IS MORE ON ITS TOES--DISAPPOINTEDLY YOURS--" AND SEND IT AIR MAIL, MISS POTHOOKS...
THEN HE LEARNS THE HARD WAY THAT IF YOU WANT TO GET AN OVER-DUE RESPONSE, WRITE A FOLLOW-UP...
THAT LETTER I JUST DICTATED TO YOU--TEAR IT UP--DON'T SEND IT--I JUST GOT THEIR ANSWER TO MY FIRST LETTER...
IT'S GONE, MR. BIGDOME--YOU TOLD ME TO GET IT RIGHT OUT...
THANX AND A TIP OF THE HATLO HAT TO RALPH MUELLER 5585 E. 31ST ST. CLEVELAND 14, OHIO
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4-22

How Dealers and Contractors Become Distributors, and Parts Makers Grow Big

THANKS to local progress, a marketing concept which could prove to be a bonanza for our TOTAL industry is being shoved into high gear by major manufacturers on a national scale.

What is it? The "automated modern home kitchen"—sold as a prideful package in an all-in-one financing deal by a single contractor.

By the phrase, "our TOTAL industry," we mean that any specialty sales program for a refrigerated product reduces costs and advances profits of everybody connected with EVERY segment of the refrigeration and air conditioning industry.

That goes for commercial refrigeration wholesalers, air conditioning contractors—and servicemen, too.

When more household refrigerators and freezers are sold, the manufacturers of components also used by commercial refrigeration and air conditioning products can hold down prices.

Reason: thanks to the extra volume provided by big sales of home refrigerators, costs of similar air conditioning and commercial refrigeration components are reduced.

Eventually more service calls will be needed on these consumer products. So, parts jobbers will benefit; likewise service firms.

Big idea of these complete new "home automation" deals is to trade up a single purchase to several related and style-matched "wife-saver" appliances in a continuing time payment contract.

There's profit in that concept for everyone concerned.

"Eye appeal" complete kitchens have genuine pulling power for many housewives—particularly those whose happy families entertain a lot.

Also they intrigue women who desire more freedom from household monotony, and those who have a flair for original home decoration.

Families which are ready to buy entire home modernization programs, instead of one new labor-saving home machine at a time, are growing steadily in numbers.

Coupled with today's lineup of glamorous new automation products, this circumstance indicates that our related and complemented refrigeration and air conditioning industry's opportunities can be tremendously enhanced.

By helping the complete-kitchen promoters sell this spanking and sparkling idea everyone will benefit.

The so-called package kitchen probably is too big a project for the average retailer, some feel.

He has all he can do now—selling refrigerators, freezers, room air conditioners, plumbing and heating wares, etc., in sufficient volume to earn a modest living.

Only the biggest and best dealers *and contractors* can handle this important job.

And that's why most "decorator kitchens" currently are being installed by (and sold directly to) speculative builders of new homes and apartments.

To penetrate the much bigger market of "old home" occupants, however, manufacturers need to cultivate the nation's top dealers who CAN swing the big deals, PLUS air conditioning contractors.

THEY have the money and technical ability (these home modernization specialists).

Any able big-time dealer can handle complete-kitchen sales successfully if his distributor has adequate warehouse facilities to insure fast delivery of equipment when required, and if the distributor has a central servicing arrangement to relieve the dealer of this problem.

In non-metropolitan areas, the air conditioning contractor, with an adequate service and installation department, is the man who can handle this business adequately.

This packaged kitchen idea can boost sales of *all* refrigeration products—if said imaginative "add-on" home equipment is demonstrated locally and dramatically by those relatively few dealers AND CONTRACTORS whose finances and long list of satisfied *and serviced* customers qualify them to do the job.

The mass of mankind has not been born with saddles on their backs, nor a favored few booted and spurred, ready to ride them legitimately, by the grace of God.—THOMAS JEFFERSON.

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

Trade Mark reg. U.S. Pat. Office; Est. 1926

AIR CONDITIONING HEATING & REFRIGERATION NEWS

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F. M. COCKRELL, *Founder*

'The Conscience of the Industry'

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From the Files of the News

25 years ago . . .

A self-contained room cooling unit which operates without using special power lines or water supply and drain piping has been put on the market by General Electric Co. Water condensed on the cooling coils is evaporated into the condenser cooling air and blown outside through the window duct connections. . . . Frigidaire Corp. has received an order from the Roosevelt hotel in New Orleans for immediate air conditioning of 113 rooms in the hotel, reports J. J. Nance, air conditioning division manager.

Recently developed by National Tank & Mfg. Co. is a "Streamline Sanitary Portable Milkhouse" built entirely of heavy galvanized steel and equipped with a low-pressure Frick commercial refrigerating unit. . . . Just put into service is a refrigerated truck for carrying ice cream to rural areas surrounding Cleveland, a gasoline engine driven refrigerating unit furnishing the refrigeration.

A letter to the editor from S. J. Benn, chief engineer, Merchant & Evans Co., calls "unnecessary" regulatory ordinances and code calling for the use of silver solder in making the "streamline" type of joint in refrigeration installations. . . . Announcement was made in the NEWS that the series of articles on refrigeration principles and servicing operations, written by K. M. Newcum, will be published as the "Master Service Manuals."

10 years ago . . .

Sales volume reported by members of the Commercial Refrigerator Manufacturers Association for the first half of 1950 increased 36.2% over the same period in the preceding year, with self-service display refrigerators accounting for the major share, it was reported at the annual meeting of the CRMA, at which Robert L. Tyler, president of Tyler Fixture Corp., was elected president. . . . Weber Showcase & Fixture Co., manufacturer of food store equipment, has notified its field sales organization that it is cutting down on the number of models it will produce because of shortages of strategic materials, especially steel.

Congress is seemingly very close to agreement on an economic Controls Bill that will give President Truman broad discretionary powers to control industrial production, materials, credit, and prices and wages. . . . Refrigeration Equipment Manufacturers Association has released data showing how much water a mechanically refrigerated dehumidifier will pull out of the air.

Ebinger Baking Co. of Brooklyn has ordered 30 Typhoon packaged air conditioners as part of a remodeling program. The late-season order reflects the results obtained from an installation of eight units a year earlier. . . . Central Service Supply Co., refrigeration supplies wholesaler in Syracuse, has installed a 7½-ton air conditioning unit to cool offices of the space in its building leased to tenants.

How the installation of an evaporative condenser can pay for itself in less than 10 years was outlined in an article by Aldon V. Lokken, manager, Evaporative Condenser Dept., The Trane Co.

60 years ago . . .

From the RECOLD MUSEUM

These 50-to-60 years ago items are from the Recold Museum Library, maintained by Hy Jarvis, Recold Corp. president.

First general course in the science of refrigeration was announced in plans to start a new school of agriculture at Chappaqua, N. Y. The course in the practical as well as scientific aspects of refrigeration will feature both class and laboratory instruction and the building of a model plant on the 200 acres of school property.

OFF THE CHEST

DOES CONDITIONER MFRS' LITERATURE MISS THE BOAT?

Buhai Publishing Co.
Skokie, Ill.

Editor:

Enclosed are copies of *Advertisor's Digest* for July, 1960, carrying the story, "World Markets Beckon," which appeared originally in your publication. The story appears as the lead-off article.

Thank you for letting us once again use material from your excellent publication. I am sure our readers will find the material interesting and worth while.

Incidentally, as spokesman for your industry, I can't help but feel that you would be doing it a great service by appealing to the various manufacturers to hit a happy medium in their consumer literature.

I recently casually investigated air conditioning equipment for our home and I found that the manufacturers seem to look upon the consumer either as a complete idiot—with emphasis on knobs, color, and superlatives—or as a real expert—with technical information that only an engineer could understand.

There must be a common meeting ground between manufacturer and consumer so that the consumer can get at least a smattering of technical information in terms that he could understand. I can't help but feel that the manufacturer who does this will get the business.

ED. BRENNER, Editor

NIESS NOTES SLIGHT INCONSISTENCY

York Corp.
York, Pa.

Editor:

A slight inconsistency caught my eye in your July 11 issue of the NEWS concerning gas driven equipment in larger sizes.

On Page 39 the statement is made "steam turbine-driven centrifugals are normally applied where high pressure steam is available and where the load exceeds 500 tons." On the following page, in the article concerning the combination system, the statement is made "using York equipment, the installation consists of a 238-ton turbo unit and a 574-ton absorption unit."

Now I realize you use the word "normally," however, this 500 ton restriction does not apply nor has it applied on York centrifugal equipment. We have been very successful in applying steam turbine driven centrifugals in the range from about 125 tons on up into the thousands.

Inasmuch as your readership is so high we certainly don't want anybody to get the impression that a steam turbine centrifugal is not applicable below 500 tons.

R. C. NIESS,
Manager-Product Sales
Engineered Machinery

I WAS SO INTERESTED IN HERRICK ARTICLE . . .

724 Nineteenth St., S.E.
Cedar Rapids
Iowa

Editor:

Your article about the dedication ceremonies at the Purdue Herrick Laboratory so completely embued me with feelings of admiration for this magnanimous benefactor that I overlooked the "Inside Dope" until some of my co-subscribers showered me with fan mail. I want you to know that I do read your articles and that my friends read your "Inside Dope."

Really, I consider you the INDUSTRY'S greatest dedicated booster and broadcaster. I get a lot of satisfaction and inspiration from your realistic presentation of noteworthy ideas in the editorial columns of your paper.

If I appear to express myself as an acquaintance of long standing, I attribute it to the universal attitude of those you know, as well as those who know you; either personally, or editorially.

Any means of communication radiate from you the same expression and feeling of partnership, mutual understanding, inspiration and vision into the future possibilities of this INDUSTRY in its very broadest scope.

If Eisenhower, during W.W. 2, needed encouragement from the ranks, the appropriate words might have been KEEP GOING.

Similarly, I submit these words to you.

LA MAR S. COOPER

SPORTS ARENA VISIT FOUND AIR CONDITIONING DOING ITS JOB WELL AT DEMOCRATIC CONVENTION

Recold Corp.
7250 E. Slauson Ave.
Los Angeles 22, Calif.

Editor:

I dropped in at the Los Angeles Sports Arena during the Democratic Party convention to determine what air conditioning problems, if any, were experienced in connection with the convention. In an interview with William Kimble, chief engineer for the Sports Arena, whom you previously interviewed for your story in the July 11 issue, I learned that the system was operating satisfactorily despite some mighty adverse conditions.

The peak load was reached on the night of the nominating session with approximately 20,000 active people in the Arena to hear the presidential nominations and balloting. To keep the air clear of smoke, 80% make-up air was being used. Discharge temperatures which are normally maintained at 68° F. rose between 4° and 10°. No auxiliary air conditioning was installed within the Arena to compensate for the additional load imposed by high intensity lighting and TV and communications equipment.

All in all, it certainly proved the effectiveness of the system and equipment. I thought the follow-up story on the convention would be of interest to you, especially as it refutes the "comical" satire developed in the *Wall Street Journal* article quoted in your story.

LEO J. MUNCHHOF

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

The complete line of refrigerants in screw-top or clip-top disposable cans

Use Can-O-Gas to put accurate charges in water and beverage coolers, freezer cabinets, and automobile air-conditioning systems. Wide variety of preweighed charges, accurate to ±4 grams. Get "Freon*-12" in 15-oz. cans; "Freon-114" and sulfur dioxide in 1-lb. cans; "Freon-22" in the new 2-lb. and 1-lb. aluminum cans, and methyl chloride in 2-lb. cans. For complete information, write Refrigeration Division, VIRGINIA SMELTING COMPANY, 191 Jefferson St., West Norfolk, Va.

*A Du Pont TM

Multi-opener dispenses contents of a single can or up to four cans individually or simultaneously.

Single can valve opener for any size Can-O-Gas, clip-top or screw-top. Opens 15 or 16-oz. can of any other packaged refrigerant. Special nylon seat assures positive shutoffs.

VIRGINIA Chemicals

Esotoo • V-Meth-L • Can-O-Gas • VascoCel • Permagum • Presstite Tape • Water Treatment Chemicals • Suniso Refrigeration Oils • National Sales Agent & Repacker for Du Pont's "Freon" Refrigerants

Available in Canada and many other countries

Electronics Firm Air Conditions To Cut Down on Time Spent Correcting Errors

NORTH HAVEN, Conn. — A small electronics firm here is air conditioning its entire production space to cut down on time spent correcting errors.

Technical Measurement Corp. discovered that hot weather increased the number of errors made by its 40 women production workers. An error in one of the 80,000 soldered joints in a digital computer could cost two weeks of expensive engineering time to correct, said Robert M. Ghen, 30-year-old president of the young firm.

"In our fast-moving business," says Ghen, "the amortized engineering time on a product is often more than the cost of labor and materials. We have to protect our competitive position not with patents, but with engineering know-how. To tie up engineers in hunting errors is a flagrant waste of my company's resources, so reducing errors becomes an important objective."

Ghen's decision to air condition his fast-growing production space came last summer when quality control absorbed an increasing portion of his engineering staff's time.

Quality Control Problem Grew In Warm Weather

In cool weather the number of errors made by production workers remained fairly low. But as temperatures rose, so did the complaints from Ghen's eight engineers who had to spend increasing amounts of time tracking down miscues.

The only factor Ghen could pin his summer troubles on was the weather inside his plant—and he knew that could be changed with air conditioning.

Technical Measurement makes a versatile digital computer which serves any of a number of functions when outfitted with plug-ins. The basic instrument is completely transistorized and weighs only 27 lbs. (down from an initial 3,000 lbs. in a tube-equipped version). It sells for $17,000—a figure that grows substantially when plug-in attachments costing from $2,000 to $6,000 each are added.

Rate of Output Relatively Unimportant

Ghen is comparatively unconcerned with the productivity of his women workers. Whether they solder 500 or 400 connections per day is of limited importance because direct labor costs are so small a part of total costs. However, he finds that employes are happier and there are fewer complaints in cool weather.

Last summer he closed his plant at noon on three days. One technician quit because of the lack of air conditioning. Ten highly paid people spend half their time in the non-air conditioned area.

In addition to engineers, Technical Measurement employs four skilled men who plate, etch, and print circuit cards. The offices, which house nine engineers, a chemist, and nine other administrative - clerical personnel, have always been air conditioned by a 10-ton capacity packaged unit.

This summer a 25-ton packaged unit is being installed to cool the shop, where existing hot air ducts can be used. Cost will be just under $8,000. A 20-ton unit will handle a new office and laboratory area and a 30-ton machine will cool the addition to the shop space.

All the equipment is manufactured by Carrier Air Conditioning Co. and engineered and installed by the George Ellis Co., a Carrier dealer in New Haven.

Ghen joined Technical Measurement as products manager in 1956 when it had a net worth of minus $700 and annual sales of $70,000. He became president last year.

At the end of the fiscal year on June 30, Ghen estimated that the firm's net worth was $440,000 and its annual sales were $1,225,000. Its 75 employes are now housed in a 12,000-sq. ft. plant. An 18,000-sq. ft. addition is nearing completion.

Bell & Gossett Declares Dividend

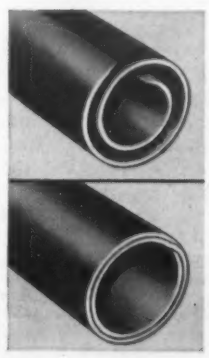
MORTON GROVE, Ill.—The board of directors of Bell & Gossett Co. recently declared a regular quarterly dividend of 17½ cents per share on the company's common stock, payable Sept. 1 to stockholders of record at the close of business on Aug. 15.

Trane Promotes Wm. F. Delany

LA CROSSE, Wis. — William F. Delany has been promoted to manager of the Detroit office of The Trane Co., W. D. Graham, Jr., vice president, sales offices, announced.

Delany, who has been with the Detroit office for the past ten years, succeeds A. A. Kernjack. Kernjack retires from his position of manager to concentrate on an important account which he developed for Trane, according to the firm's announcement.

There's almost no limit to the things Bundy can mass-fabricate



Bundyweld is the original tubing double-walled from a single copper-plated *steel* strip, metallurgically bonded through 360° of wall contact for amazing strength, versatility.

Bundyweld is lightweight, uniformly smooth, easily fabricated. It's remarkably resistant to vibration fatigue; has unusually high bursting strength. Sizes up to ⅝" O.D.

Whether it's a complex shape, or just a simple bend, Bundy knows virtually no bounds when it comes to mass-fabricating steel tubing. You see, Bundy engineers are tubing specialists . . . backed by never-ending, ever-bending experience. And here are just a few of the benefits you will derive.

From a single strip of steel comes double-walled, copper-brazed Bundyweld® Tubing—leakproof by test—and the safety standard of the refrigeration industry. Unique beveled edges provide smooth inside and outside seams . . . no inside flash to be removed.

Whatever the stage of product development, Bundy designers can be called in for consultation and for suggestions of time- and money-saving modifications.

For low unit-cost and uniformly high quality, Bundy-designed fixtures and machines are geared to mass-fabricate parts to *your* specifications.

Got a tubing problem? Better see the leading producer in the refrigeration industry *first*! Write, wire, or phone Bundy Tubing Company, Detroit 14, Michigan, today.

Refrigerated Trailer Has Plastic Skin

SAN FRANCISCO—What is billed as the first non-metal trailer built for commercial food hauling made its debut here recently. It substitutes a stressed skin plastic laminate for the metal posts and beams of conventional "reefers" to cut weight and add bonus cargo space for refrigerated and frozen foods.

Developed by Hupp Corp.'s Perfection Div., the new reefer design is based on more than six years' experience in manufacturing insulated radar vans and portable Arctic shelters for electronics equipment.

Adaptable for hauling food via highway or piggyback, the Perfection Reefer will be distributed by Rail-Trailer Co., a pioneer in the piggyback transportation field. The new trailer was introduced at the opening of the San Francisco exposition of the Railway Electrical & Mechanical Association.

Weighing 10,500 lbs. bare, the 40-ft. long, 12½-ft. high trailer is 1,500 lbs. lighter than conventionally-constructed reefers, according to Perfection.

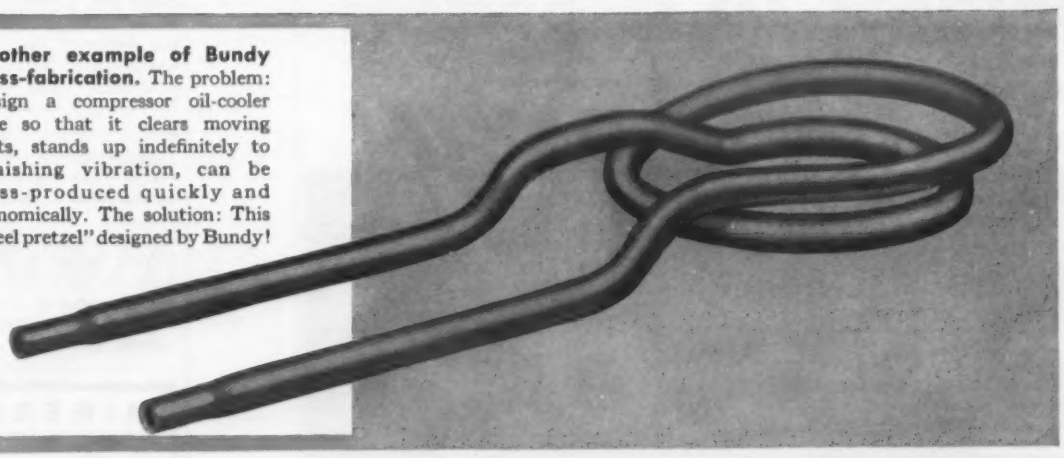
Built as a seamless cube with fiber glass reinforced polyester resin plastic skins over rigid epoxy-welded insulation, the new trailer has walls and roof only 4 in. thick, a floor only 5 in. thick, it was pointed out. Total useful cargo space of 2,184 cu. ft. gives the new reefer the capacity of a conventional reefer 4 ft. longer, Perfection said.

"The smooth plastic can be cleaned easily, an important consideration in sanitary food transportation," it was stated. "Surfaces resist corrosion from salt and other road chemicals, and because they are color impregnated, periodic repainting of pitted areas are eliminated."

Airtight construction is said to be a significant advantage "because even tiny holes in the outside covering of a reefer let in heavy air blasts at high speeds. The moisture in this infiltrating air condenses in the insulation, adding dead weight and building up heat load on the refrigeration system. Independent tests conducted under National Bureau of Standards specifications showed no measurable water absorption in the new trailer's insulation.

"The new trailer is priced competitively with quality grade 40-ft. reefers and can use any type of refrigeration system, either mechanical or dry ice."

PIGGYBACK or over the highway, this new Perfection reefer is said to provide more cargo carrying space with far greater cold retention than other refrigerated trailers on the road.



Another example of Bundy mass-fabrication. The problem: Design a compressor oil-cooler tube so that it clears moving parts, stands up indefinitely to punishing vibration, can be mass-produced quickly and economically. The solution: This "steel pretzel" designed by Bundy!

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WORLD'S LARGEST PRODUCER OF SMALL-DIAMETER TUBING • AFFILIATED PLANTS IN AUSTRALIA, BRAZIL, ENGLAND, FRANCE, GERMANY, ITALY, JAPAN

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Hunter Mfg. Names Firm To Expand Its National Sales

CLEVELAND — Hunter Mfg. Co., maker of Hunter cab and cargo heaters and "Cargo Cooler" truck refrigeration units, has engaged Collins Associates, Inc. of Cincinnati to plan and execute an expanded nationwide sales and distribution program, it was announced.

"Hunter's truck heater sales increased 20% in 1959," the announcement said. Cargo Cooler refrigeration units sold in the first five months of 1960 were approximately twice the number sold in this period last year. A recent 20,000-sq. ft. plant addition provides manufacturing facilities for Hunter's truck equipment division.

"Collins Associates nationally represents Morrison Steel Products, Inc., Premier Mfg. Co., Inc., Parkhurst Mfg. Co., and others.

D & D Truck Refrigeration Names So. Calif. Outlet

EL MONTE, Calif. — Bob Forbush, manager of D & D Truck Refrigeration here announced the apointment of Industrial Truck Bodys, El Monte, as distributor for the Southern California territory.

D & D manufactures "Kol-Power" truck refrigeration units.

Bow Compact Air Handling Unit

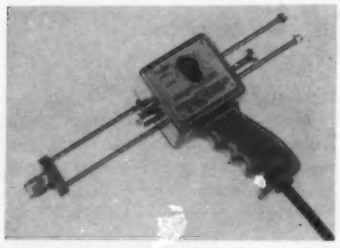
● Compact air handling units designed to fit where space is at a premium in apartment houses, office buildings, commercial establishments, etc., are being offered by Thermal Engineering Corp., Dept. AH&RN, P. O. Box 13254, Houston 19, Texas.

The units are made in horizontal type as well as vertical type. Five sizes are available—nominal 800 c.f.m., 1,000 c.f.m., 1,500 c.f.m., 2,000 c.f.m., 3,000 c.f.m. Cooling coils may be chilled—water or direct expansion. Heating coils may be hot water or steam.

All-Purpose Oiler Has Telescopic Spout

● "Zoom-Spout," a new all-purpose oiler with a 14-in. telescopic spout, has been introduced by P-G Products Mfg. Co., Inc., Dept. AH&RN, 230 East 162nd St., New York City 51.

Originally developed for general appliance service, Zoom-Spout is said to meet all household lubricating requirements. Its telescopic spout makes hard-to-reach oil cups and lubricating points easily accessible, without risk of injury, the company said. The oiler is made of transparent plastic and features squeeze bottle action.



Arc Spot Weld Gun Improved

● A new and improved model H arc spot weld gun has been announced by Bren Weld Corp., Dept. AH&RN, 5114 Third Ave., Brooklyn 20.

This patented gun features the exclusive automatic time control to insure uniform and consistent welds from one side without back up, the company said. No triggers or buttons are used.

The model H gun weighing 2 lbs., welds 14 gauge to any thickness (minimum two pieces 26 gauge).

Adds 2 Gas and Oil Furnace Models

● Addition of two new gas and oil models to its furnace line has been announced by Hall-Neal Furnace Co., Dept. AH&RN, 1322 N. Capitol Ave., Indianapolis.

The models, named the "Victorgas" and "Victoroil" "Fin Deluxe" will incorporate new forced warm air features, it was stated.

"The new Victorgas furnace will make available the latest in 'electronic flame control' and will control temperature within one-tenth of a degree," the company claims. "This is accomplished by a tiny 'thermistor' heat sensing control that detects temperature changes before the homeowner does and automatically adjusts the burner flame through an infinite range of sizes to meet the exact heating requirements.

"Also, both the gas and oil models will incorporate Victor's patented heat radiating 'fins' which can save up to 30% in fuel consumption. Other improvements available on both models are a dual speed blower for controlling cool air drafts during early and later blower operating stages and a new five-sided radiator for further increasing fuel economy.

"Both models will introduce a new design featuring a wedge shape front panel that streamlines the units for installation in recreation rooms. Both the Victorgas and Victoroil furnaces are available in four sizes. The gas B.t.u. is rated 100,000, 125,000, 150,000, and 175,000 input and the oil B.t.u. at 84,000, 112,000, 135,000, and 150,000 at bonnet."

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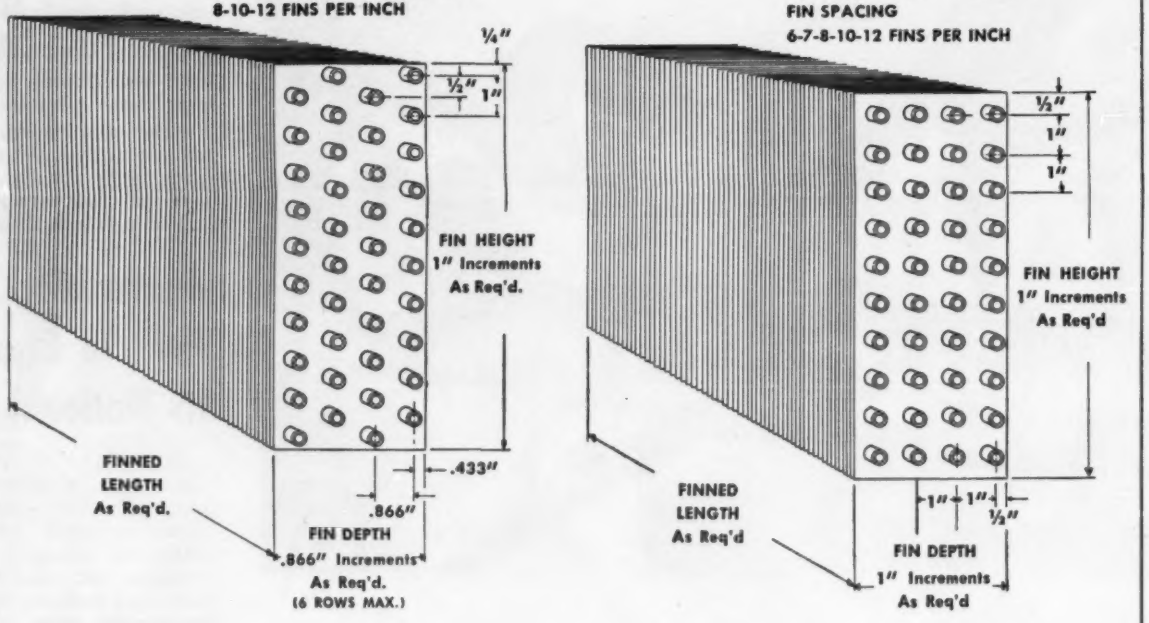

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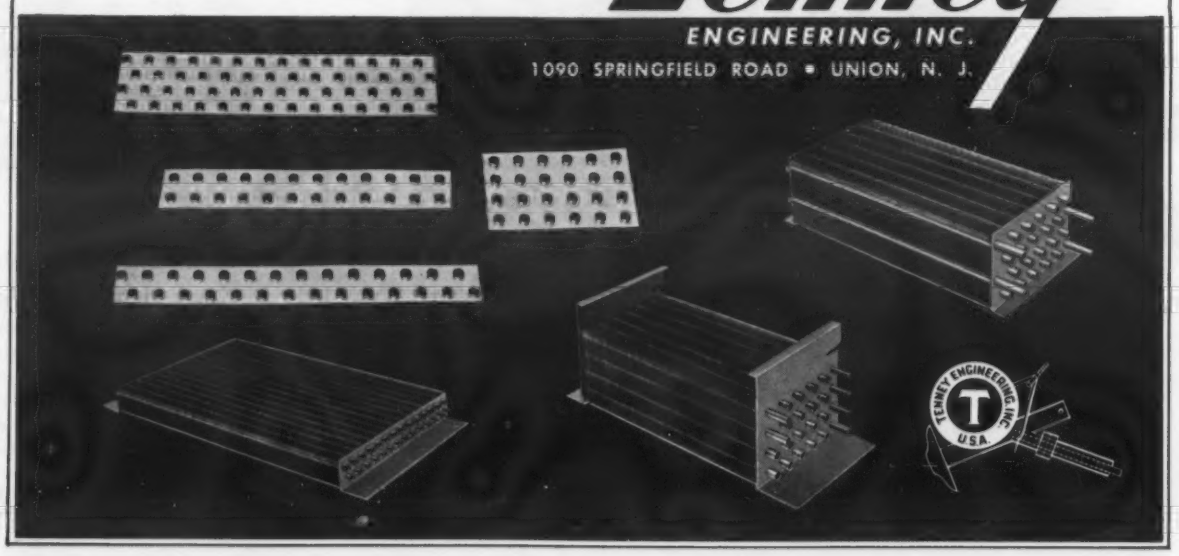

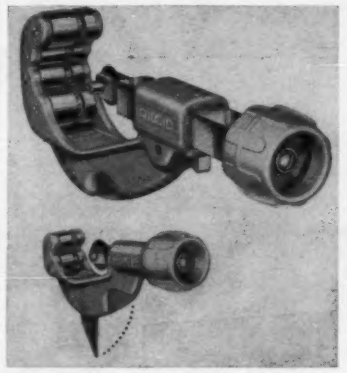

Tubing Cutters Feature Enclosed Feed Screws

● Two new "Ridgid" tubing cutters, said to feature fully enclosed feed screws that can't jam with chips or dirt, have been introduced by The Ridge Tool Co., Dept. AH&RN, P.O. Box 670, Elyria, Ohio.

Called the Ridgid Nos. 105 and 205 tubing cutters, they give quick, clean cuts of copper, brass, aluminum tubing, and thin-wall conduit, the company said. Each carries a spare cutter wheel in the handle. A special cutter wheel for the No. 205 only is available for cutting plastic and aluminum pipe.

The No. 105 cutter has a ⅛ to 1⅛ in. O.D. capacity. The No. 205 cutter has a ⅛ to 2⅝ in. O.D. capacity "and, because of this large size range, has instant slide-to-size adjustment—just a slight push on handle snugs the cutter wheel against tubing where it locks until released," the company pointed out.

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JIFFY
CLIPS

Also available without mounting hole for use with gun.

Made of heavier materials! Has exclusive inverted rib, that provides more strength at the bend of clip . . . and, of course, adds the benefits of famous "Snap On" feature! Send for literature.

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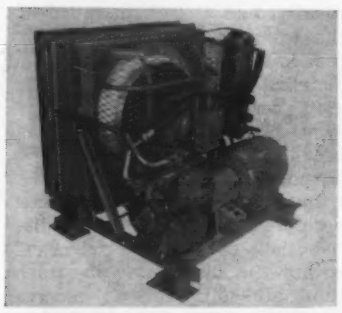
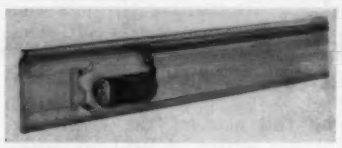


Refrigeration Assembly Is 'Easy To Service'

● A high-capacity mechanical refrigeration assembly with "easy-to-service" features has been developed by Carrier Air Conditioning Co., Dept. AH&RN, Syracuse 1, N. Y., for railroad reefer cars.

"A separate motor and compressor permits quick replacement of either of these vital working parts with virtually no loss in availability of the car," the company said. "Installation and servicing is further facilitated by easily-disconnected, self-sealing couplings which eliminate the need to dehydrate the system before it is put back in operation.

"Designed to operate between -10° F. and 70° F., the Carrier compressor is driven by a 15-hp. electric motor that lowers temperatures rapidly. The compressor automatically starts unloaded, a safeguard which permits easier starting and longer life. A centrifugal fan with backward curved blades guards against overloading the evaporator fan motor and new prismatic sight glasses make it easy to check the liquid level in the receiver."



Adds to FBC Radiation Line

● An addition to its FBC radiation line has been announced by Federal Boiler Co., Inc., Dept. AH&RN, Midland Park, N. J.

The new baseboard item is called the 10-in. "Hi-Output" baseboard, featuring a new element in ¾ in. and 1-in. sizes. The element is constructed of copper tubing and aluminum finning combination.

The Hi-Output baseboard is available in standard 8-ft. or special job-site pre-cut lengths. A full line of accessories is also offered.

The firm also announced that it is retaining its standard 8-in. "Ultra-Power" baseboard line to offer, according to Federal, one of the widest selections of baseboard styles and sizes for all heating needs.

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Makes Motor DRIVEN APPLIANCES SAFE!

MIGHTY MITE MOTOR PROTECTORS

MECHANICAL INDUSTRIES PRODUCTION CO.
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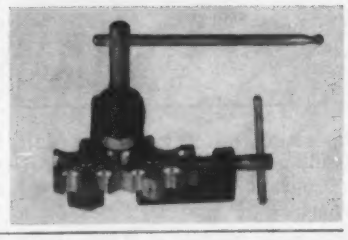
One-Piece Flaring Tool Offered

● A new one-piece flaring tool for flaring copper, brass, and aluminum tubing "without cracking or splitting" is being offered by Elgin International, Ltd., Dept. AH&RN, 1410 Broadway, New York City.

The compact tool produces flares of 3/16, 3/8, ¼, ½, 5/16, and 5/8 in., according to the company.



30-Year Life Expectancy Claimed for Caulking

● A caulking compound with a claimed life expectancy "in excess of 30 years" is available for refrigeration and air conditioning applications, according to the Farboil Co., Dept. AH&RN, 801 Key Hwy., Baltimore 30.

Called "Farboil Epothane Farbo-Flex," it "remains permanently flexible on the exterior or interior and will withstand extreme continuous expansion and contraction when exposed at temperatures from -65° F. to 300° F.," the company said. "Adhesion is fusion-like and is not impaired by impact, virbation, contraction, or expansion."

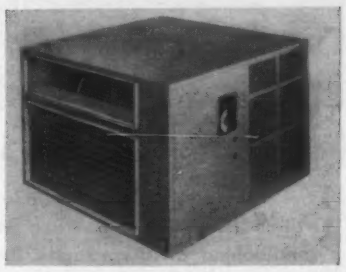
The company also offers a modified Epothane coating it says features "nearly all the qualities of pure Epothane coatings, at about one-half the cost." Known as "Farboil Epothane Bitu-Thane #100," this product is said to be especially advantageous for air conditioning and refrigeration industry requirements.

2 and 3-Hp. Heat Pumps Added

● Two sizes of a new heat pump —2 hp. and 3 hp.—have been announced for the residential and light commercial market by Day & Night Mfg. Co., Dept. AH&RN, P. O. Box 2222, La Puente, Calif.

"Residential installations can be made in the attic, basement, or on the roof or a ground level slab outdoors," it was pointed out. "Commercial installations using several units can also be located on the roof space, suspended indoors, or installed mounted through an outside wall."

Among features of the new models, the company said, are "dual thermal expansion and check valves to insure precision refrigerant control; process valves to assure minimum maintenance costs by easing checking and servicing operations; a two-speed inside blower motor to permit choice of air volume to match system requirements; and a high-pressure limit control to prevent system overloading.



"The compressor itself is hermetically sealed with thermal and overload protective devices. The outer casing has a three-coat protection against weather," according to the manufacturer.

"Factory assembled supplemental heater units for installation in the discharge air outlet or elsewhere in the duct system are available in 3KW (10,239 B.t.u.) increments as optional equipment for installations in areas where supplemental heating capacity is required."

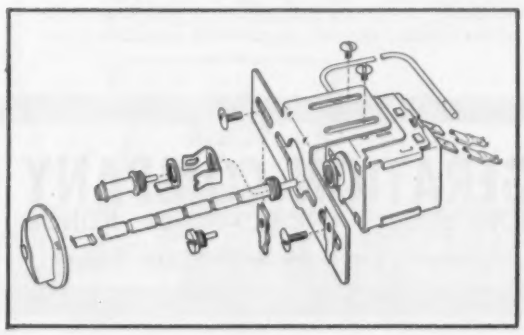
23
Ranco A30 Replacements

take up less space than your tool kit,
yet do the work of 1000 exact replacement controls

It's a fact! Only 23 basic controls and installation packages . . . and you're in business to handle 9 out of every 10 replacement control calls. Now you can carry an inventory of refrigeration and air conditioning controls right in your truck for on-the-job control replacements and eliminate costly, time-consuming trips back to your shop or wholesaler. That means you service more units each day, increase your weekly dollar volume, build more customer satisfaction.

Check your wholesaler today or tomorrow for new Ranco A30 Replacements. 23 controls do the work of 1000 . . . cover 90% of your job applications for household refrigeration, freezers, water coolers, beverage coolers, and air conditioner control replacements.

What could be easier, faster . . . more profitable?



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TECH CENTER

by Frank J. Versagi, Technical Editor

Multizone Air Handling System Coils, Controls (2)

This continues the discussion of multizone procedures written by Norbert K. Hall, manager, refrigeration and air conditioning division, Ready Power Co., Detroit. Readers are invited to express their reaction after the last segment has appeared.

AVOID HORIZONTAL FACE SPLITTING OF COILS: e.g. top section, middle section, and bottom section. Unless circuited so that full face area is covered by each section as mentioned earlier.

On multizone operation, this type of coil splitting will not be as satisfactory for installations subjected to substantial variations in load. Here is what happens:

On a 60-ton system, let us assume that the coil is split vertically into three sections:

30 tons top section
15 tons middle section
15 tons bottom section

Assume that this system is in operation on a multizone unit equipped with a staging control. (Program motor operated by zone motor and switches or a ductstat set-up.) When zone dampers are part way open, they are by-passing 50% of the normal air supply *around* the cooling coil. We will also assume that the controls have staged out the 30-ton coil section so that it is inoperative. This means that of the original 100% air quantity, 50% is being by-passed, 25% of the total is going through the upper 30-ton section which is not cooling, and the remaining 25% (representing about 15 tons total load or less) is now passing over the two lower coil sections which have 15-ton valves installed on each of them.

Actually the air quantity through the lower coils will drop to less than 25% of the total "cooling coil" air, because the lower sections will have a higher resistance due to condensate restricting the air space and the top section will be free of moisture. The valves are 15-ton rating and are now flooding and hunting, because load on each is reduced to less than 7 tons.

As the load drops further and more air is by-passed around the coil, this condition becomes progressively worse.

The only solution for this problem is to install pilot-operated expansion valves in place of the standard expansion valves, and bend the distributor lines until the distributor outlets face straight down. An orifice nozzle could also be installed at the entrance to the distributor if it is impossible to change the distributor. An orifice nozzle may sometimes be necessary even after the distributor has been pointed downward. The purpose of rearranging the distributor and installing an orifice nozzle is to provide better distribution of liquid refrigerant within the distributor in order that all coil sections receive equal amounts of liquid during low load operation.

The pilot-operated expansion valves appear to control well (on tests conducted in the field and in test labs) down to about 10% of their nominal rating. However, it will not remedy the situation satisfactorily if the distributor remains horizontal, since at 10% or 20% of normal flow rate, gravity will cause most of this liquid to feed into the lower circuits leaving the distributor and the upper circuits will get mostly flash gas. The result is that the active coil sections do not all cool evenly.

To express it differently: It will not help the situation to install pilot-operated valves capable of 10% control if the reduced flow of refrigerant is passed into an "oversized" distributor where all of the various active coil passes are not fed approximately equal amounts of refrigerant.

Another factor to consider when using face (one on top of another) coil splitting is that a cold deck control will not function properly due to the effects of the air passing through the inactive portion of the coil. The lesser of two evils on this type of arrangement is to locate the stat in the return air system on the coil side of the fresh air intake, where it will at least be subjected to a more direct indication of existing load conditions.

DOMINANT ZONE CONTROL METHOD: On certain types of multizone unit applications, one certain zone is known to be dominant. That is, when this zone requires cooling, the remaining zones also require cooling. When this particular zone is satisfied, the other zones are also known to be satisfied. This is usually true of bowling alleys which do not have a restaurant. The dominant zone is the bowling area.

In this type application, end switches on the zone motor can directly control refrigerant solenoids—or a two-stage ductstat can be installed in the return air duct from this one zone.

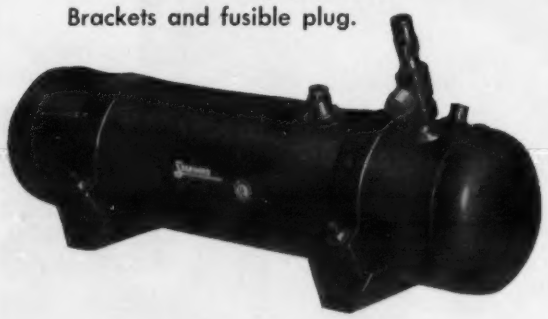
This dominant zone control system will not be satisfactory for use on any system where the "high load area" shifts at different times of the day due to changes in solar load or due to shifting of personnel load. An example of this would be in an office building where the office proper is the dominant zone during the day, but where a large hall or meeting room becomes the dominant zone during night meetings when the offices are empty.

(To Be Continued)

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

RECEIVERS : CONDENSERS

STANDARD
Liquid Receiver with Rotalock Valve, Standard Brackets and fusible plug.



Standard Upright and Horizontal Receivers are of rugged construction, available in a variety of sizes, U.L. or A.S.M.E. tagged. Pumpdown capacity in pounds Freon figured on 80% net.

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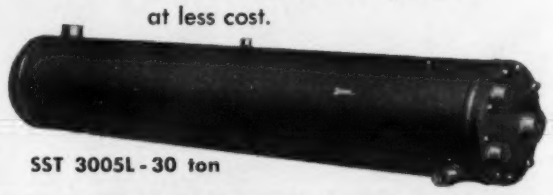
Most advanced design available. More effective operation at less cost.



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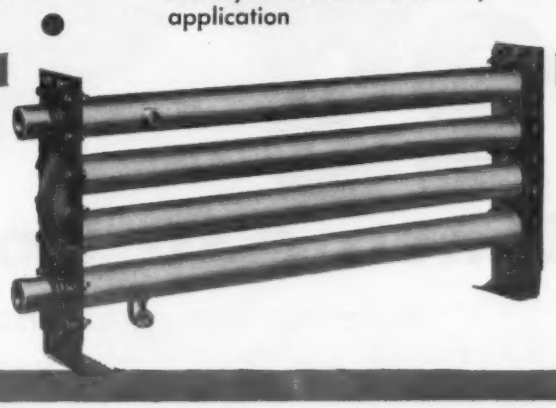

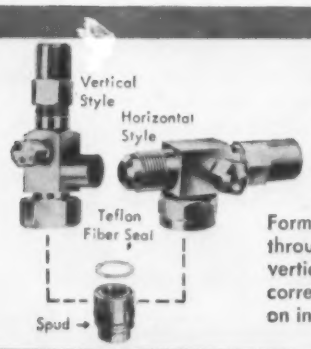

STANDARD ROTALOCK VALVES
Cadmium or Tin Plated internally for better lubrication and externally for corrosion resistance.
Formerly available only to manufacturers, Rotalock Valves can now be obtained through refrigeration wholesalers. These valves are made in both horizontal and vertical styles and may be rotated 360°, permitting their positioning to any angle corresponding to the direction of the tubing, thereby eliminating excessive labor on installations.

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Since 1920
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Sears Spokesman Counters Objections To Dehumidification-Reheat System

Last week, G. E. LaPorte, assistant director of engineering, Fedders Corp., took exception to data presented by Sears, Roebuck & Co. on its "Coldspot" room air conditioners which are controlled humidistatically as well as thermostatically. The Sears units make use of Ranco-designed reheat circuitry to provide both dehumidification and cooling.

Shown LaPorte's comments, a Sears spokesman made the following statement to the NEWS.

There are several conclusions stated in Mr. LaPorte's letter which I believe, are based on false premises.

He speaks of designers who have explored the reheat idea and discarded it as being impractical for room air conditioner use. Perhaps the investigations were not carried far enough to develop a suitable unit. Reports from the field indicate that users are well satisfied with the operation of our air conditioner.

I do not agree that normal cooling operation should be compared with reheat operation at the same conditions. The cooling function is of primary importance at ASRE conditions of 80° F. dry bulb and 67° wet bulb inside, and 95° dry bulb, 75° wet bulb outside.

If the cooling capacity of the unit is properly matched to the heat load of the room, the compressor will run more than 75% of the time. With a conventional unit, this means that the humidity in the room will be completely out of control during the off-cycles; but with a humidity control unit, it will be held constant at a very nominal increase in operating cost.

'Unit Sized To Handle Peak Load Is Badly Sized for Milder Days'

What Mr. LaPorte completely overlooked is the fact that any unit which is properly sized to handle the peak heat load of a particular application is very badly **oversized** for that application at milder conditions which are encountered much more often.

For example: assume that a room air conditioner is installed in a space which requires it to run 90% of the time when the temperature is 95° outside to maintain an 80° inside temperature. When the outside temperature drops to 85°, the unit operating time required to maintain the 80° inside temperature will be about one-third that required at the higher temperature, because the difference between inside and outside temperatures is one-third that formerly encountered.

With the unit running at about 27% running time, the "cold, clammy" condition so accurately described in Mr. LaPorte's letter is very quickly reached. **And this is with a unit properly sized for maximum normal load.**

If Mr. LaPorte will examine weather records for any part of the country where air conditioning is normally required, especially the coastal areas, he will discover that relatively mild but highly humid conditions (80°-85° dry bulb and 50-95% relative humidity) prevail three to four times as many hours per year as do extremely high temperature conditions (90° to 100°) for which the normal cooling only cycle is designed.

Under such conditions, the owner of a conventional room air conditioner has two choices: 1) he can turn off his air conditioner and endure the humidity and heat, or 2) he can lower the temperature setting on his air conditioner thermostat which will cause his unit to run a higher percentage of the time. This will reduce the humidity in the room, but it also lowers the dry bulb temperature—often to the point where the owner must wear a light wrap to be comfortable.

In fact, some manufacturers go so far as to use thermostats which automatically lower the dry bulb temperature with a rise in humidity, or recommend that the thermostat be set at a continuous run position, and claim this as a "humidity control" feature!

The use of a multi-speed fan motor is certainly no solution to the problem either. As Mr. LaPorte is undoubtedly aware, it is practically impossible to vary the capacity of a given unit more than 10% by changing fan speeds without a) encountering unstable fan motor operation, b) encountering compressor overloads because of inadequate condenser air, or c) evaporator freeze-up problems because of inadequate evaporator air, or c) a combination of all three.

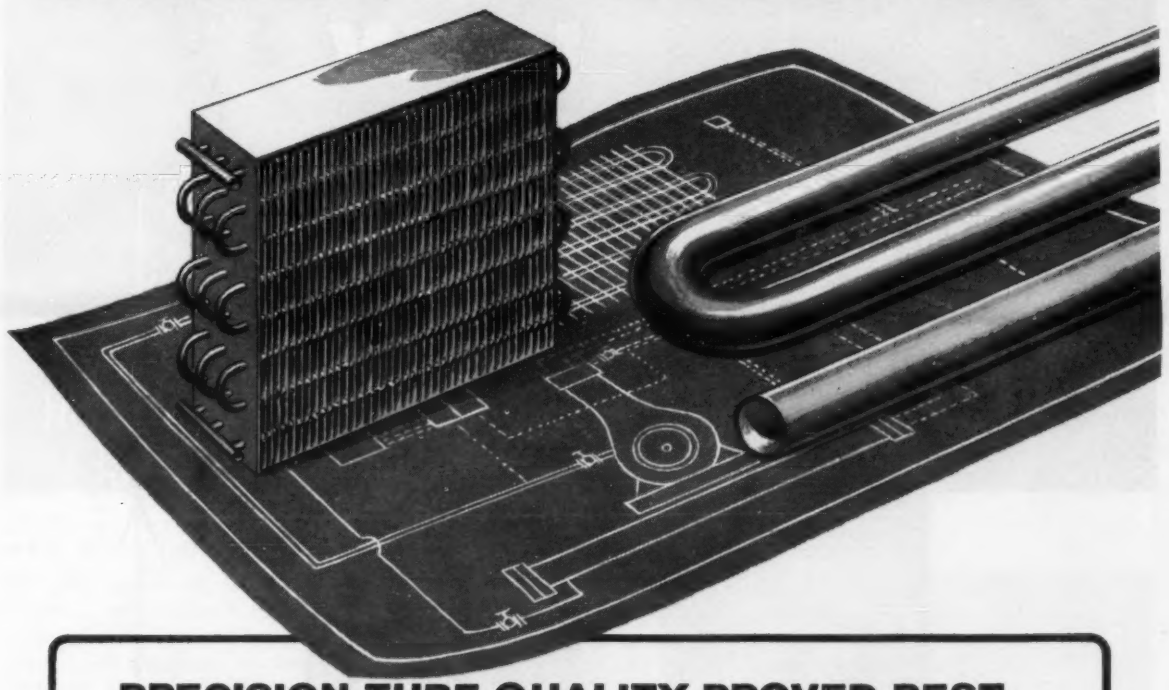
A 10% change in capacity is not nearly adequate where the change in sensible load is as much as 100%.

The point I am trying to make is that I do not consider Mr. LaPorte's comparison of normal cooling and the reheat operation of a humidity control unit valid because the dehumidify and reheat cycle will normally operate at the milder temperatures at which we have rated the unit, instead of at the higher temperatures at which it will normally operate as a conventional cooling unit.

It is my opinion that an air conditioner should be designed and rated for conditions of actual use, not some artificial condition maintained in a controlled test room. In addition, we have provided the customer with a humidity control on the unit so the dehumidifying and reheat function need not be used when it is not needed.

I was not aware that any other manufacturer had ever manufactured and marketed a room air conditioner with a refrigerant circuit similar to the Coldspot humidity control models. I am sure that examination of the Coldspot unit would reveal some refinement of circuit, especially in evaporator construction, over early attempts at building a dehumidify-reheat circuit. I feel confident, also, that more efficient operation would be found.

WHERE *Precision-eering* PAID OFF IN INCREASED PRODUCTION AND PROFITS



PRECISION TUBE QUALITY PROVED BEST... REDUCED REJECTS

A leading manufacturer of air conditioning and refrigeration units was confronted with the usual and costly problems of temper deficiencies in ordinary tubing. Peak production was not possible because of wrinkles at the bend, unevenness in length after forming, and—worst of all—*leakers* after assembly.

But these problems were solved! After testing several makes of tubing for temper, straightness, roundness and accuracy, Precision Tubing was found to be the only one that rated "Excellent" in all categories.

Throughout the industry more manufacturers are proving, on their production lines, the extra value of Precision Tubing. If you need 3/8" x .016" wall, 5/8" x .022" wall, 7/8" x .025" wall, or any special size for hydraulic or mechanical expansion, depend on Precision to improve your quality and reduce your costs. Regular Mill Prices, too!

Also available in size .010" O.D. to 1.125" O.D. in copper, brass, aluminum, nickel and Ni Span C, accurately drawn seamless capillary tubing in straight lengths or coils. *Write for Precision Tube catalog to*

PRECISION TUBE COMPANY, INC.
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PRECISION TUBE COMPANY

NORTH WALES, PA. • PRECISION-EERS OF SMALL TUBING

Report from Northwest

13-15,000 Electrically Heated Homes Reported In Western Washington State

By Frank J. Versagi

BELLEVUE, Wash. — Last year, 3,500 electrically heated homes were added to the lines of Puget Sound Power & Light Co., the utility which serves some 187,000 meters in western Washington State.

"We now have between 13 and 15 thousand electrically heated homes on our lines," stated A. B. Couch, residential sales director.

Although located across Lake Washington from Seattle (see accompanying story), Puget Power serves no customers in that city. "Our customers are chiefly residential; we have relatively little industrial power consumption on our lines."

This impressive accomplishment has been achieved without any active promotion on the part of the utility, according to company spokesmen. Puget Power is just now beginning the preparation of data sheets and promotion kits to go out after the market.

"For the most part, owners of electrically heated homes are satisfied with performance and comfort," said K. E. Hollingsworth, commercial sales director who works closely with Couch on home applications.

"In the early days, some of the glass panels were installed by people who sold and handled them as though they were vacuum cleaners. As a result, glass panels have suffered in reputation although there are good installations being made even today."

Until relatively recently, the NEWS learned, Puget Power set an unofficial limitation of 1,300 sq. ft. for homes which used electric heat. Now they will take on any houses at all. "Part of the reason," explained Hollingsworth, "is that we have recently dropped our demand charge which made it undesirable for larger houses to consider electric heat."

The utility cited the former demand rate as a factor, also, in the "negligible" sales of heat pumps in this area. But only one factor.

"Probably the most important factor against heat pumps here is our non-need for air conditioning. Home air conditioning is practically non-existent here. While we have mild winters, we are a 5,275 degree day area; *this includes June, July, and August,*" both Couch and Hollingsworth emphasized.

"Only one company has tried to move heat pumps here, and they made the mistake of going through the same untrained sales outlets which gave panel heaters a black eye," stated a third company executive.

The NEWS learned that recently a major manufacturer of heat pumps has decided to attempt controlled sales in this area, this after years of a policy not to sell here.

The average residential power consumption on Puget Power's lines is 9,700 kwh. According to Couch, this is three times the national average. "New homes are averaging over 10,000 kwh, and these figures do not include electric heating."

PUGET POWER
ALL-ELECTRIC
RESIDENTIAL SERVICE
(Single phase, 60 cycles, at a nominal potential of 120/240 volts)

AVAILABILITY:

1. This schedule is available, upon application in writing, to Customers in single family residences using electric service exclusively for their entire lighting, cooking, and water heating requirements, where such service will be supplied through a single meter. Such service may include space heating.
2. Motors rated a 7½ hp. or less may be connected under this schedule.
3. Water heaters shall be thermally insulated, storage type of 40 gals. minimum capacity, heated by two non-inductive elements, each separately thermostatically controlled. The allowable wattage of the upper element shall be within the range of 50 to 75 watts per gallon inclusive and the lower element shall be 25 watts per gallon of tank capacity.
4. All water heating installations and equipment shall be subject to the approval of the Company. . . .
5. Individual units for space heating larger than 1,380 watts shall be designed and connected for operation at 240 volts and shall be individually thermostatically controlled.
6. The aggregate heater capacity controlled by a single thermostat or automatic switch shall not exceed 5 kilowatts.
7. The Company shall be obligated to serve only approved electric space heating installations.

RATE:

$5.00 for the first 300 kwh. or less per month; 85 cents per kwh. for the next 700 kwh. per month; 1.2 cents per kwh. for all over 1,000 kwh. per month.

MINIMUM CHARGE:

$5.00 per month.

Prefer Resistance Heat to Heat Pumps

SEATTLE — Almost 20,000 electrically heated homes, only "five or six heat pumps" summarizes the situation on the lines of Seattle City Light, the municipally - owned electrical utility here.

"Although we accept any load which our customers put on their lines, we do not actively promote electric heating. Nevertheless, we have 10,000 single family residences and over 9,000 separately billed apartments using resistance heat, chiefly of the baseboard type," stated Roland C. Cornelius, rate engineer for the utility. The average rate for heating is near one cent per kwh.

For reasons discussed in the accompanying article about nearby Bellevue, Wash., heat pumps have never taken hold here. "Further, their use of supplemental resistance heat when the temperature drops makes them undesirable load for us," said Cornelius. There are a few water source heat pumps installed where the owner has a convenient water supply, but in general, heat pumps are not looked upon favorably, the NEWS was told.

* * *

Commercial air conditioning is up. Over 4,200 hp. of equipment were installed in office buildings last year; this compares to 428 hp. in 1955.

A NEW LOW IN HEIGHT...
SAVES THIS MUCH SPACE
AEROVOX P136F
17.5 MFD 370 VAC
AEROVOX MOTOR-RUN CAPACITORS
Aerovox cracks the space barrier with a new **compact** capacitor designed specifically to meet the demands of the refrigeration and air conditioning industry. Aerovox's new "space saving" AC motor run capacitors are almost 15% shorter than conventional units enabling you to reduce overall chassis heights. The reduction in can height has been achieved without any sacrifice of electrical performance and life characteristics. The same high quality materials and superior manufacturing know how are still a very important part of these new compact units. Available in voltage ratings of 236, 370, 440 and 660 VAC in a wide range of capacitances for prompt delivery in production quantities. All units furnished in drawn metal cases with doublelock seams and hermetically sealed for continuous duty operation. Supplied with double blade universal terminals and new one piece dual cup bushings to meet all UL creepage requirements and exclusive Aerovox Weatherguard® case finish for maximum protection against rust and corrosion.
If your requirements call for special designs, Aerovox design engineering representatives have the necessary training and experience to assist you on short notice in solving your special capacitor problems. You are invited to draw upon Aerovox's years of pioneering experience in the design and manufacture of AC capacitors for the refrigeration, air conditioning and motor industries.
Write today for descriptive literature on our new COMPACT capacitors.
AEROVOX CORPORATION NEW BEDFORD, MASSACHUSETTS

Report from Northwest

Electric Heating Has Been Selected For 18 New Schools Since Jan., 1959

BELLEVUE, Wash. — Since January of 1959, 18 new schools have selected electricity for space heating on the lines of Puget Sound Power & Light Co., here.

One has been in operation through its first winter, several others are under construction or in design stage; of the latter, most are scheduled for completion in 1960 or '61. Bellevue is just across Lake Washington from Seattle.

"Actual energy consumption on the completed school, at Bothell, was considerably less than had been calculated," according to K. E. Hollingsworth, commercial sales director.

"For the period Dec. 31, 1959 through Feb. 1, 1960, the total cost for space heating and water heating was $483.90. With consumption at 91,560 kwh. and a 249.6 kw. demand, the heating rate calculates to a little over 5 mills," Hollingsworth told NEWS editors who visited the completed school and two schools under construction. The Bothell school has 20 teaching stations.

A grade school being built on Mercer Island in Lake Washington makes use of Trane unit heater/ventilators. A new State code passed this year, makes it mandatory that schools be supplied with positive ventilation, and the Trane units are designed to maintain temperatures while handling 25% outside air, according to Hollingsworth.

The operating Bothell school was completed before the State code was enacted and it makes no provision for ventilation, other than opening windows, "but there have been no problems at all with ventilation."

Both the utility and others in the area are waiting with interest to see how the new grade school at Surrey Downs performs. Instead of unit ventilators, this school will use duct heaters, each of which will handle a complex of rooms. Preliminary tests in mild weather have indicated that warm-up time may be unduly long with this central system, one engineer told the NEWS.

SCHOOLS CAN BE CUT OFF POWER LINES

To protect itself against excessive demands for power by schools during the normal peak hours of 4:30 to 6:30 late in the day, Puget Power insists that all electrically heated schools have a control system which will take them off the lines during these hours if the outside temperature falls below 35°, at which condition the school would normally call for maximum heating.

"On the Bothell school, this situation occured only twice during the heating season, and it posed no hardship because the time is after school hours," Hollingsworth explained.

In the event the school should need heat during these times, further controls assure the fact that the load will come on in suitable increments. This step control will take as long as an hour at the Surrey Downs school which is using duct heaters.

The NEWS learned that many of this area's best known consultants and architects are working on electrically heated schools. A jurisdictional dispute of sorts took place at first between the mechanical and electrical contractors. The situation seems to have resolved itself in that the mechanical contractor runs the heat loss calculations and selects the equipment; the electrical engineer wires the installation and engineers the control system.

Canadian Combination Utility Finds

Availability of Natural Gas Stops Sale of Electric Heat In Homes

By Frank J. Versagi

VANCOUVER, B. C., Can.— From 1950 through 1956, over 3,000 electrically heated homes were added to the lines of B. C. Electric. Then natural gas became available and the sale of electric heating all but stopped in residences. Instead, some 18,000 homes have gone to gas heating each year for the last three years.

"The reason is chiefly economic," states R. W. Racine, heating and air conditioning engineer of the utility which in spite of its name is a combination utility offering both gas and electric service. "Our power averages 1.2-1.3 cents per kwh.; gas is available at an average rate of 12.5 cents per therm— or about half the cost of electricity."

Performance - wise, electric heat has been generally satisfactory in homes, according to Racine, although there were problems with poorly made glass panels for a while. Newer installations use baseboard, and there have been a few radiant panel (ceiling) applications of electric heat. In most homes, he said, odor buildup or humidity was no problem, because the typical Vancouver area frame house "has plenty of natural ventilation."

This ventilation is a good thing, Racine holds. He describes a "weatherstripping craze" of a couple of years ago. "People buttoned up their houses; they began to experience condensation. To overcome condensation they opened a window—and wasted heat."

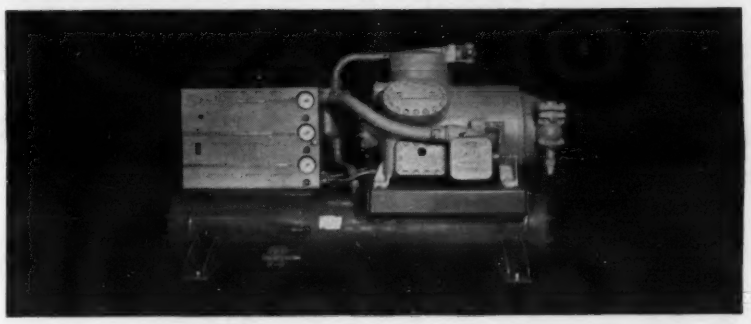
There are odor problems in well built apartments which use

(Continued on next page)

3 NEW DEVELOPMENTS FROM CARRIER!

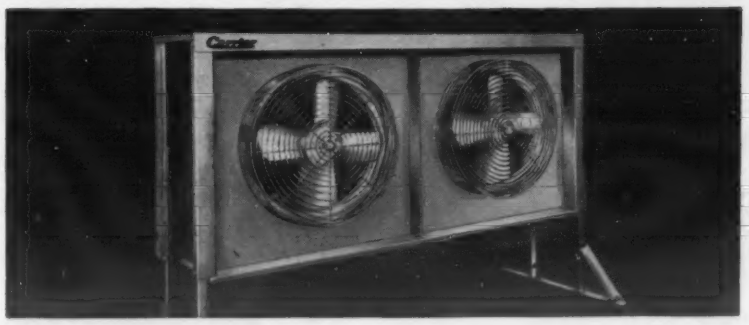
6G AND L HERMETIC CONDENSING UNITS

With the development of the 6L80-83-85, Carrier now offers a complete line of hermetic condensing units with refrigeration capacities from 10 to 145 tons for both air conditioning and refrigeration installations. The 6G and L units, entirely factory assembled and wired, consist of a compressor, motor, water-cooled condenser, safety controls and motor starting and protection equipment. If desired, they can be ordered in models without a water-cooled condenser.



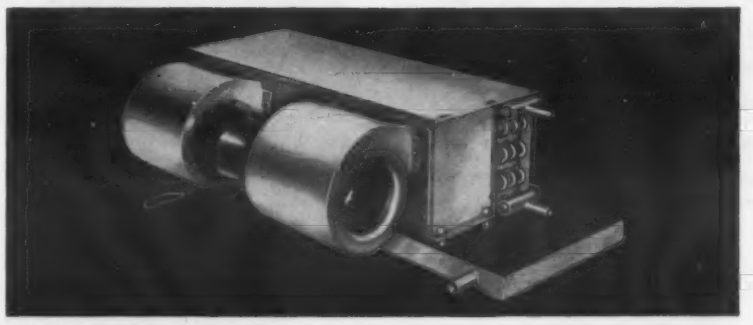
9AB AIR-COOLED CONDENSERS

Skillfully engineered, laboratory tested, the new Carrier 15-ton condenser can be mounted on the roof vertically for an extremely low silhouette — or horizontally. Powerful direct drive fans move large quantities of air evenly across the entire surface of the coil—a factor that increases the efficiency by utilizing the full condenser capacity. Other Carrier air-cooled condenser units are available with horizontal discharge in three capacities—5 tons, 7½ tons and 10 tons.



36W FAN AND COIL WEATHERMAKERS

This portion of Carrier's extensive line of fan and coil Weathermakers* with a single piping system will provide individual control of cooling and heating for multi-room buildings. This versatile unit is for overhead type of installation. It can be concealed or mounted in-the-space with an available metal cabinet. A complete line of control packages can be used to meet the most difficult specifications. The unit comes in 4 capacities: 200, 300, 400 and 600 cfms. **Reg. U.S. Pat. Off.*



Want the complete story on the most valued franchise in the industry? Call your nearby Carrier distributor. Or write Carrier Air Conditioning Company, Syracuse 1, New York.

Carrier Air Conditioning Company

A DIVISION OF CARRIER CORPORATION

Electric Heat In the Northwest--

(Continued from preceding page)

ceiling panels, the utility engineer told the NEWS. Since air circulation is all but non-existent, odors do build up; this is especially true of an apartment dweller if he throws a party.

In B. C. Electric's area, there are perhaps 40-60,000 homes still using manual fuels—sawdust, wood, coal, stove oil, Racine estimates. "Most of these, when they convert, will go to gas."

The utility gives some 10,000 home presentations a year on heating equipment. "Over 70% of these presentations result in sales." The company is not partial to any heating system; it issues a seal if a heating system meets its minimum requirements, and the seal is given to warm air, hydronics, or electric installations which qualify.

"We have a moral obligation to assure our customers of satisfactory comfort," Racine emphasizes.

There have been only three heat pumps installed on B. C. Electric's lines; the units performed adequately, but were excessively expensive to operate, according to the utility. First cost, too, is a factor limiting the application of heat pumps. "A heat pump here costs about $2,500, installed; compare this to $9-1,200 for a quality hydronics job and about $600 for a good warm air installation."

Still another factor which precludes the use of heat pumps is the "low desire for air conditioning." There is almost no residential air conditioning here; as in the United States, comfort cooling must first go through the commercial stage before it can impress the residential market."

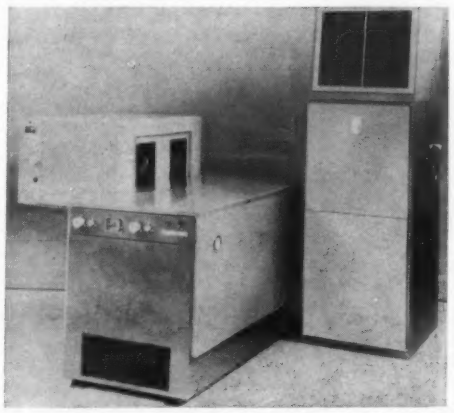
The commercial stage is apparently well on its way in Vancouver. "No major building goes up now without air conditioning, where only a few years ago, cooling was either neglected or considered an extra."

Racine estimates that commercial air conditioning is going in at an average rate of 4,000 tons anually. He predicts that gas air conditioners in small commercial applications, 25-ton and under, will "likely prove more economical for the customer based on our studies."

Winter design temperature in Vancouver is 10°; the city is a 5,500-degree day locality.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Rheem Announces 'Highly Flexible' 2-Stage 9-Ton Condensing Unit



NEW, "HIGHLY-FLEXIBLE" Rheemaire condensing unit (center) of nine tons total capacity has twin hermetic condensers with single dual-circuited "air-film" condenser and condenser blower. Horizontal and vertical air handlers are shown with the new Rheemaire RA-110 to illustrate application in cooling two separate areas from the single unit, or operating the air conditioning system for two stages of cooling. Installation may be made with Rheem precharged refrigerant tubing.

CHICAGO—The Home Products Group of Rheem Mfg. Co. has announced its new, largest "Rheemaire" condensing unit—a "highly-flexible" two-stage 9-ton unit.

"The unique feature of the new RA-110 Rheemaire unit, in addition to the 'air-film' principle employed in all Rheemaire systems, is the single dual-circuited 'air-film' condenser and condenser blower, with twin hermetic compressors," the company stated.

"Application of the new Rheemaire unit is the air conditioning of two areas—such as two adjacent stores, or two floors of a store—or for installations with wide variation of heat gain.

"A typical installation of the Rheemaire RA-110 in a mild climate would include one cooling circuit connected to an evaporator coil mounted in the heating ductwork, for use in between-seasons cooling. For higher temperatures, a vertical or horizontal air handler would be connected to the second cooling circuit of the RA-110 for handling peak loads.

"The separate controls provided for each compressor, however, include a time-delay relay to prevent both motors from starting simultaneously.

"For operation in low-ambient temperatures, and for year-round commercial use, a low-ambient temperature head pressure control system and a water dump-and-fill system are optional accessories.

"When separate controls are used, the Rheem R-10 control system is installed to provide a 'Check-Lite' indicator, showing when either half of the new Rheemaire condensing unit has shut down on its safety control. A separate control package is supplied for two-stage installations."

Rheem claims the Rheemaire RA-110 is "the largest unit to be supplied with precharged refrigerant tubing with suction lines of only ⅞-in. diameter" and also that it is 'the largest single-phase unit currently available. (Each compressor draws only 23 amperes at design conditions.)"

Size of the cabinet enclosing the new Rheemaire RA-110, with capacity of 110,000 B.t.u. per hour, is 29½ in. wide, 35½ in. high, and 62 in. long, the same as the Rheemaire LRA-75, introduced in 1959 with cooling capacity of 75,000 B.t.u. per hour, the company said.

BLAST

SCALE... SLIME... SLUDGE...ALGAE

but SAVE the EQUIPMENT!

For Easier Work . . .
More Satisfied Customers . . .
DEMAND . . .

VAPCO SCALE REMOVER
The SAFE cleaner in powder form!

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For those who "Make Their Own" cleaner!

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Complete literature on request or see your dealer—TODAY!

Vapco QUALITY PRODUCTS
Complete literature on request or see your dealer TODAY!
GARMAN COMPANY
ST. LOUIS 25, MO.

NEW 25 amp Contactor for Refrigeration, Air Conditioning and Heating...

This new Furnas 25 ampere contactor provides reliable, trouble-free operation required for unattended domestic and commercial applications. Rated to 25 amperes full load, to 150 amperes locked rotor for hermetic motors, to 3 hp 550 volts for general purpose motors, and to 25 amperes for resistance heating applications.

Furnas Features

- Compact unitized construction
- Front accessible terminals for straight through wiring
- 2 and 3 pole, 550 volts
- Visible silver-cadmium oxide contacts
- Encapsulated coil and magnet
- No-kiss potential
- Combination snap-on coil leads or pressure coil terminals

ACTUAL SIZE
CLASS 41 25 ampere, 2 and 3 pole

Original Equipment Manufacturers: write today for Bulletin 41-B4—prices upon request
1111 McKee St., Batavia, Illinois

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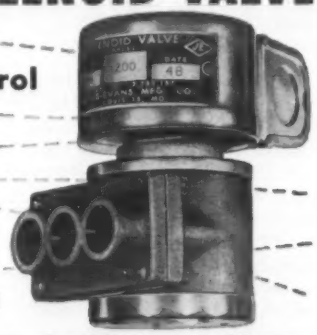
FURNAS ELECTRIC COMPANY
BATAVIA, ILLINOIS
SALES REPRESENTATIVES IN ALL PRINCIPAL CITIES

J-E TYPE 701
3-WAY SOLENOID VALVE

for flow control of hot or chilled water with fan-coil units



This New addition to the J-E Line provides–

- Economical temperature control.
- Separable solder flange for easy installation.
- One size for ½ to 10 gpm for simple selection

Write for information bulletin today.

Controls Division
JACKES-EVANS MANUFACTURING CO.
4427 Geraldine Ave., St. Louis 15, Mo.

Oct. 28-Nov. 2

Dr. Beckman Will Conduct Business Sessions of ARW Shipboard Convention

CLEVELAND—The Air Conditioning & Refrigeration Wholesalers announced that it has secured the services of Dr. Theodore Beckman to set up and conduct the business sessions during the 25th annual convention to be held aboard the *S. S. Hanseatic* Oct. 28-Nov. 2.

Dr. Beckman

Nationally known as an educator, author, and consultant, Dr. Beckman serves with distinction at Ohio State university's Dept. of Business Organization, it was pointed out.

wholesaling, having written the first book on that subject in 1926, it was noted. From 1935 to 1938 he was associate editor of the "Journal of Marketing."

In October of 1953 he was entered in the Hall of Fame in Distribution at the Boston Conference on Distribution "for distinguished contributions to the advancement of Distribution in the last quarter century." In 1959 Dr. Beckman became the recipient of the American Marketing Associations' Paul D. Converse Award in recognition of his "original contributions to advancement of theory or science in marketing, especially in wholesaling."

SUBJECTS LISTED

"Dr. Beckman will be in complete charge of the business side of our program," William Miessemer, president of ARW, announced. "During the past three months we surveyed our members as to those problems they wish to discuss during the forthcoming convention.

"The results of this survey show that sales and market analysis, inventory control, credit, customer relations, and the legal aspects of buying and selling were the most desired subjects.

"Dr. Beckman is preparing the program around these subjects. Panel groups of four wholesalers will be assigned each subject. Dr. Beckman will present the problems as he sees it and ask the panel to discuss these problems. At the conclusion of each panel discussion, questions will be received from the floor.

"As a wind up to the two-day program, Dr. Beckman will discuss, 'Wholesaling Opportunities 1960-1970.' "

He is the author or co-author of more than a dozen books and many articles in his fields of specialization. One of his books, "Credits and Collections In Theory and Practice" has gone through six editions, and one of his co-authorships, "Principles of Marketing" has also gone through six editions.

He pioneered in the field of

New Robertshaw-Fulton Post Goes to A. G. Baitz

RICHMOND, Va.—Arthur G. Baitz has been appointed to the new post of director of engineering planning for the Robertshaw-Fulton Controls Co., it was announced by Thomas T. Arden, president.

Baitz has been assigned to the company's Fulton Sylphon Div. in Knoxville, Tenn., as director of sales training.

In his new capacity, Baitz will appraise and coordinate the development of new product lines within Robertshaw - Fulton's eight manufacturing divisions and two research centers in the United States. He will advise the company management as to growth possibilities in present or related fields, and evaluate possible future acquisitions and/or mergers.

Amick & Miller Opens Huntington Branch

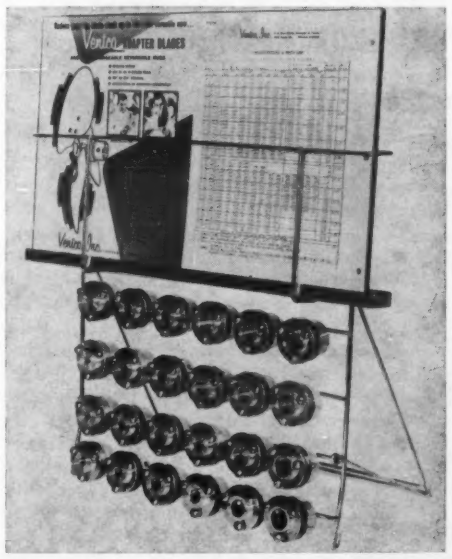
CHARLESTON, W. Va.—W. Pat Miller, president of Amick & Miller, Inc. of Charleston, announced the opening of a branch in Huntington, W. Va.

Located at 1317 Fourth Ave., the store is under the management of John Wright. The Huntington branch is a member of ARW and this marks the 472nd location in the nation served by this association, it was pointed out.

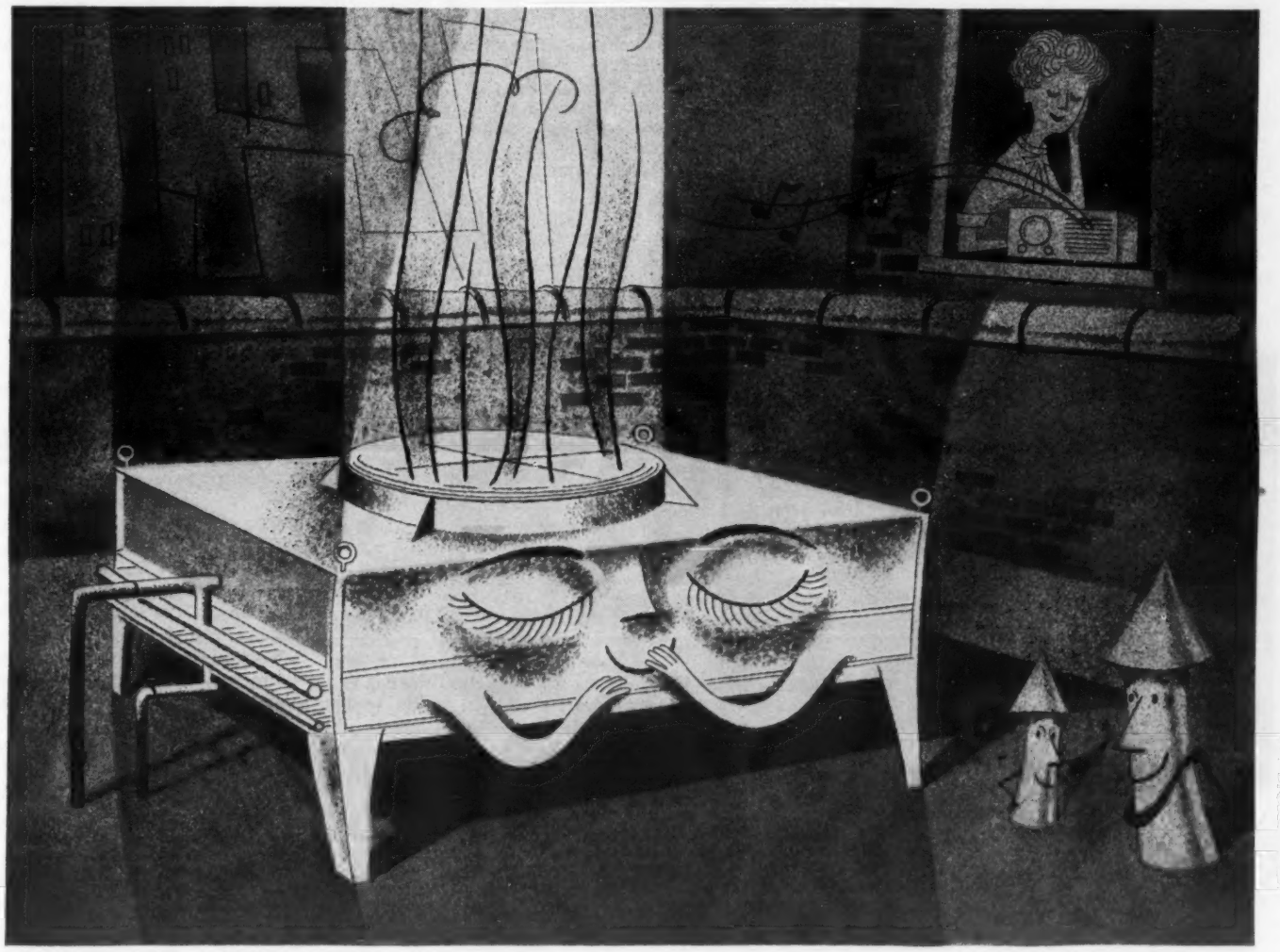
Represents 'ULOK'

NEW YORK CITY — George Q. McNamara Co., Detroit, has been appointed exclusive sales representatives for "ULOK" cube air filters in Michigan, Union Carbide Development Co., Div. of Union Carbide Corp., announced recently.

New Merchandising Aid



CHROMIUM PLATED steel display stand for merchandising Ventco interchangeable reversible fan blade hubs is now being offered to stocking distributors by the Houston, Texas fan blade manufacturer. Dealers should contact Ventco, Inc., 1210 Tuam St., P. O. Box 8038, Houston 4, Texas.



Ever hear of a bashful air-cooled condenser?

Check the new Halstead & Mitchell vertical air flow condenser

H&M's new ACV Air-Cooled Condenser with vertical air flow hates to be showy. It's so low and so quiet, you hardly know it's there—very appealing to owners, their neighbors, architects and engineers!

Roof loading is low, too, and air flow noise is directed away from surrounding structures. This delights building owners and tenants alike.

Vertical air flow models are available in 5 to 100 tons. And like all H&M Air-Cooled Condensers, the ACV series features exclusive Turbu-Flo fins, spaced wide to prevent clogging by air-borne dirt. Multiple circuiting is available for your specific needs *at no extra cost.*

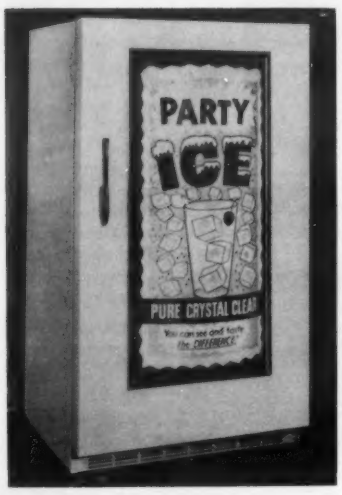
Get the whole story on H&M Air-Cooled Condensers—with propeller or centrifugal fan. Ask your refrigeration wholesaler for a copy of the new bulletin AC-102. Or write to Halstead & Mitchell, Bessemer Bldg., Pittsburgh 22, Pa.

ACV SERIES — 5 TO 100 TONS

HM Halstead & Mitchell

Air-Cooled Condensers • Finned Coil Products • Water-Cooled Condensers • Cooling Towers

'Party Ice Freezer with Illuminated Door' Introduced by Rhodes Refrigeration



PORTLAND, Ore. — The "Party Ice Freezer with Illuminated Door" is a new commercial line developed and manufactured by Rhodes Refrigeration, Inc., 10106 S.E. Stark St.

Special features include an illuminated door, with light diffused from within the door to give a dimensional effect. Wired to plug in for illumination, the door is equipped with a separate shut-off switch so that the freezer continues to operate whether or not the door is lighted. Instant-start fluorescent tubes are used for immediate lighting effect. The illuminated door is self-closing.

The 23-cu. ft. Party Ice Freezer has a capacity of 86 6-lb. bags, or a total of 516 lbs. of ice, according to the company. Measurements are: Height, 68 in.; width, 37¼ in.; depth, front to back, 30¼ in.; depth, front to back including door, 36⅞ in.

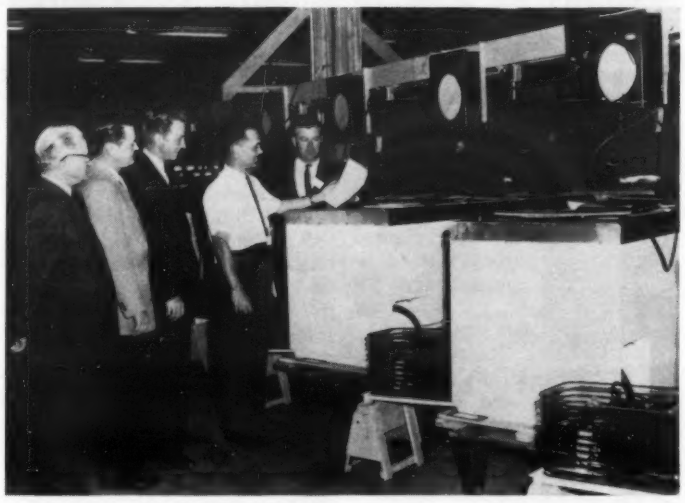
The completely self-defrosting freezer is being manufactured by Rhodes for nationwide distribution in supermarkets, drugstores, service stations, hotels, motels, clubs, and beverage and mixer houses. National distribution is being handled by Rhodes Refrigeration and by Union Ice Co. of San Francisco.

35 Distributors Help Inaugurate New Plant Of Customade Products In Conway, Ark.

CONWAY, Ark. — Some 35 distributors from all parts of the country visited Conway recently to inspect and help officially inaugurate operations of the new 206,000-sq. ft. plant of Customade Products, which manufactures Universal refrigerated cabinets for the ice cream and frozen food industries.

The visitors were officials and representatives of firms associated with the Universal Cabinet Div., Universal Metal Products Corp. of St. Louis, in marketing the line of cabinets produced by Customade. Both Customade and Universal Metal Products are subsidiaries of the Universal Match Corp. of St. Louis.

Serving as hosts for the distributors were Elmer Hoefle, vice president and sales manager of Universal Metal Products, in charge of the Universal Cabinet Div.; J. P. Stoltz, executive vice president and general manager of Customade; Richard P. Halm, controller; and Larry B. Kern, plant manager of Customade; Stephen S. Adams, Jr., president of Universal Metal Products and a director of Customade; and Vincent A. Perry, vice president and treasurer of Universal Match.



CHECKING A TEST CHART on Universal cabinet is J. P. Stoltz (without coat), executive vice president and general manager of the new Customade Products Corp., production facility at Conway, Ark. At left, are three of the distributors among some 35 from across the country who visited the new plant. From left, they are, Roy Larson, and his sons, Bob and Bill Larson, all of the Lamor Co. of Houston, Texas. At right is Vincent A. Perry, vice president and treasurer of Universal Match Corp., parent company of both Customade Products and Universal Metal Products Corp., of which Universal Cabinet is a division.

PLANT TOUR

The distributors spent an entire day touring the vast new single-story structure, third largest industrial installation in Arkansas, viewing its operations, and meeting with Customade and Universal officials. They were guests at a noon luncheon and at an informal dinner at the Conway Country Club.

The distributors' visit was the first of two events officially opening the new plant, which has been in actual production since the first week of May. More than 1,800 townspeople and other area residents, including Arkansas and Conway officials, and civic and business leaders from nearby Little Rock, attended the second function—a public open house held four days after the distributors' preview.

The full line of Universal ABC cabinets will be produced at the new plant.

Customade also will continue production of license plates, traffic signs, and other contract metal items at the new installation in the near future, when equipment for these operations is moved from the firm's other locations.

The new plant, which was built through arrangements with the Conway Development Corp. on a long-term lease basis, is the first of two to be undertaken by Universal Match in Arkansas within less than a year.

Construction began recently at Hot Springs on a 120,000-sq. ft. plant for National Rejectors, Inc., of St. Louis, another subsidiary of Universal Match. NRI is a leading developer and manufacturer of coin-handling devices for the vending industry and has newly-developed an electronic currency-accepting device which handles $1 and $5 bills and "promises revolutionary developments in merchandising."

Bohn Appoints Hugo C. Smith

DANVILLE, Ill. — Appointment of Hugo C. Smith as sales representative for Bohn commercial refrigeration products and unitary coils was announced recently by H. Blake Thomas, vice president of Bohn Aluminum & Brass Corp. and general manager of the Danville Div.

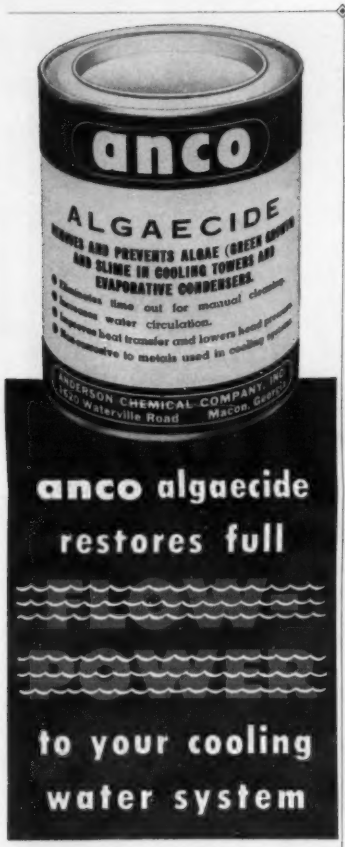
H. C. Smith

Smith is calling on wholesalers and manufacturers in Ohio and in the western halves of Pennsylvania and West Virginia as well as in Garrett and Allegany counties in Maryland.

Thoroughly familiar with all phases of commercial refrigeration, Smith has been actively engaged in this industry for more than 30 years.

Form Baton Rouge Firm

BATON ROUGE, La. — Higgins & Bone Commercial Refrigeration, Inc., 6157 Evangeline St., has been granted charter of incorporation listing capital stock of $3,500.


anco
ALGAECIDE
PREVENTS ALGAE (GREEN GROWTH) AND SLIME IN COOLING TOWERS AND EVAPORATIVE CONDENSERS.
ANDERSON CHEMICAL COMPANY, INC.
1620 Waterville Road Macon, Georgia

anco algaecide restores full to your cooling water system

Algae, fungi, and other slimes in towers and condensers create an additional handicap for your cooling system, choking off efficient passage of water through strainers, lines and tubes, cutting heat transfer, raising head pressure, and increasing corrosion. Your equipment works twice as hard to do an ineffective job.

ANCO Algaecide removes and prevents further growth of these organisms, restoring your cooling water system to efficient, economical operation. It is non-corrosive to metals and serves as a preservative to wood structures.

ANCO Algaecide is packaged in briquette form and will rid equipment of fouling organisms quickly without delay for manual cleaning. Continued use will assure permanent protection, giving your cooling water system full, efficient flow power at all times.

SPECIALISTS IN MAKING WATER BEHAVE

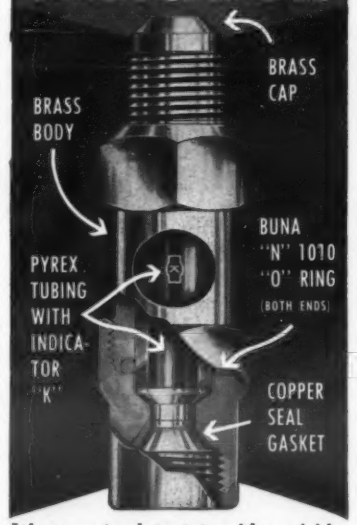
Anderson Chemical Company, Inc.

Box 1424 • Macon, Georgia

DETECT TROUBLE FAST!

IN ANY AIR CONDITIONING AND REFRIGERATION LIQUID LINE

KEROTEST MODEL R81C IN-LINE Liquid INDICATOR



It's easy to detect trouble quickly in refrigeration lines with this indicator. Letter "K" is etched on pyrex heat-resisting tube which shows through sturdy brass body at sight port. When "K" is not magnified, it indicates a shortage of refrigerant or a clogged line. Available in male and female flare sizes. Maximum operating pressure 500 p.s.i. and maximum temperature 200° F. Easy to install.

See your Kerotest wholesaler! Ask for Model No. R81C.

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FREE PARKING AND FAST COUNTER SERVICE AT THESE 4 BIG WAREHOUSES

Fedders Sales--

(Continued from Page 1, Col. 3)

gains registered by other important products.

The report noted that sales of Fedders central air conditioning systems experienced a steady increase and were significantly above those for the comparable months of fiscal 1959. Residential and commercial heating equipment was at the level of the previous year's corresponding period.

Net sales for the nine months ended May 31 amounted to $51,401,248 as compared with $38,342,688 a year earlier.

Net income, after taxes, totaled $3,475,128, including a non-recurring net profit of $106,650 from the sale of certain property in the second quarter, and was equal to $1.82 per share on the average number of 1,909,690 shares of common stock outstanding during the period. For the comparable nine months of fiscal 1959, net earnings were $1,940,963, or $1.03 per common share on the average of 1,844,522 shares then outstanding, after provision for preferred dividends.

For the three months ended May 31, sales were $15,205,032 as against $15,028,569 for the same months of a year ago. Net income was $987,427, or 52 cents per common share, against $914,647, or 49 cents per share, for the like year-ago period.

"Operations are currently continuing at satisfactory levels in relation to those for the same period of last year," Giordano said. "Earnings for fiscal 1960, therefore, should be significantly above those for 1959.

32 Complete Trane Engineering Program

LA CROSSE, Wis. — Thirty-two graduates of U. S. and Canadian colleges and universities recently completed The Trane Co. specialized engineering program, it was announced by Vice President W. D. Graham, Jr.

ASHRAE Research Program--

(Continued from Page 1, Col. 3)

to the semiannual meeting next February in Chicago.

Jennings had taken a one-year leave of absence from his position as professor of mechanical engineering at Northwestern three years ago to help the society advance its research program. This leave was extended to three years, the maximum permitted by the university. Jennings will be able to spend a considerable portion of his time with the laboratory during the next few months, Palmatier stated.

Palmatier declared that the society is dedicated to a strong research program, but that, with a limited budget for 1960-1961, it had the choice of continuing a diversified program of many relatively small projects, or concentrating on a few larger scale investigations.

As reported earlier in the NEWS, the decision was made to concentrate on environmental research. The society believes that by so doing it will make its greatest possible contribution to the progress of the air conditioning industry—taking into consideration the contributions that air conditioning can make to the general welfare.

In reviewing the research program, Palmatier pointed out that the Agreement of Consolidation and the By-Laws require the society to conduct research. The chairman outlined some of the problems and decisions reached as follows:

"It was felt that for an effective and efficient operation, an annual research budget of $300,000, and eventually at least $500,000, was indicated, together with improved laboratory facilities.

"A special Building Committee of the old ASHAE, continued after the merger, studied various aspects of the facilities program, including the question of purchase or construction of a new laboratory building in a different location.

"Against this background, your Research and Technical Committee had to make some decisions. It has repeatedly gone on record in favor of the strongest possible program at the laboratory augmented by an effective cooperative program with the universities.

"To give the reader an idea of the scale of each, during the year just passed, about $215,000 was allocated to research, of which $21,000 was distributed as grants to other laboratories.

"During the coming year, $200,000 is budgeted, of which about $25,000 will be used for cooperative research.

"How best to utilize this rather limited budget for 1960-1961 was the question to which your R & T Committee directed its attention last February at Dallas. It had the choice of continuing a diversified program of many relatively small projects, or concentrating on a few larger scale investigations.

"Since for many years the society membership has shown strong interest in, and given support to, studies on the reactions of people to their atmospheric environment, R & T Committee reached the decision that the society's reputation for outstanding contributions could best be maintained by accenting the environmental research program.

"As a result of past membership interest in this program, the Cleveland Laboratories possess exceptionally good facilities for exploring the effect of thermal environment on people, as well as odor sensations and methods of combatting odors.

"It therefore makes very good sense to utilize these facilities to the limit of the funds available.

"We of the Research and Technical Committee believe wholeheartedly in society-conducted research, and believe each member should be proud to contribute a portion of his dues to advance the frontiers of unknown areas of the sciences on which he depends for his livelihood.

"We also feel that if greater financial support were available from the membership and from our industry, an effective expanded program could be organized and maintained.

"We have recommended to the board that as a matter of fiscal policy, a minimum percentage of membership dues be allocated to research, because this type of work cannot be carried out with short-term financing.

"But all these questions are not yet settled. As a society, we have not spelled out a definitive policy for the future on research.

"Accordingly, at the Vancouver meeting, President Walter Grant directed the 1960-1961 Long Range Planning Committee, headed by J. Donald Kroeker as chairman, to make a comprehensive study of the entire research problem—policy and objectives, scope, society-conducted research, cooperative research, facilities, administration, and financing—and report 30 days prior to the semiannual meeting in Chicago next February.

"Moreover, the board has agreed that no long-range decisions should be made until the results of this study are at hand for evaluation."

In concluding his report, Palmatier said, "We want to know what you, the members, think. If you care to write me, I will be happy to hear from you, and will gladly pass along your viewpoints to Research and Technical Committee, to the officers of the society, and to the Long Range Planning Committee."

Carrier--

(Continued from Page 1, Col. 4)

about 10 men. A subsequent addition to the Carrier-Houston warehouse is planned.

Most parts will continue to be supplied from the Syracuse production lines, although certain machining operations will be contracted with Houston area firms.

Only hermetic compressors of the 6D and 6F series introduced since 1949 will be serviced in Houston, Gray said. He added that several hundred thousand of these compressors are now in use.

Houston was selected because of its western location, excellent facilities, and the presence of experienced Carrier management at Carrier-Houston Corp., Gray stated.

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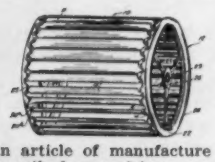
PATENTS

Week of April 12 (Concluded)

2,932,445. CENTRIFUGAL BLOWER WHEEL AND METHOD OF MAKING. Charles A. Hathaway, Litchfield, Conn., assignor to The Torrington Mfg. Co., Torrington, Conn.

1. A centrifugal blower wheel rotatable about a central axis and comprising in combination, an annular series of separate blades uniformly spaced circumaxially and each having tabs at its forward and rearward ends, a forward sheet metal end ring having near its periphery a series of slots which receive and at least partly fit the tabs at the forward ends of the blades which tabs are bent and are in engagement with the front face of the ring and which tabs securely connect the blades with the ring. . . .

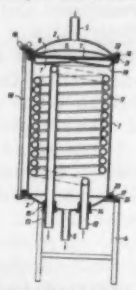
2,932,446. BLOWER WHEEL. Louis Zaro, Cleveland Heights, Ohio, assignor to Morrison Products, Inc., Cleveland, Ohio.



1. An article of manufacture of the kind described comprising, a generally cylindrical first part having annularly spaced blades and a ring portion connecting said blades, gathers formed at circumferentially spaced points in said ring portion, and a second part having a generally annular channel-shaped rim, said ring portion being disposed in the channel recess of said rim, said rim having crimped first portions engaging said ring portion between said gathers and second crimped portions engaging said gathers and holding said ring portion in locked engagement in said rim, said first and second portions tending to displace said ring portion in opposite directions.

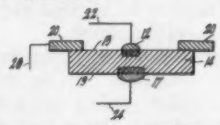
2,932,490. MILK STRAINER AND COOLER. Karl Erik Olander, Norrkoping, Sweden, assignor to Aktiebolaget Manus, Norrkoping, Sweden, a manufacturing company of Sweden.

In an easily disassembled and reassembled milk straining and cooling device of the type comprising an upright substantially cylindrical vessel to be passed by a downward flow of the



milk, and straining and cooling elements in said vessel, the combination of said elements and of auxiliary means for allowing the insertion of the device into the vacuum controlled milk conduit of a machine milking system while maintaining the easy disassembling and reassembling qualities of the device, said combination comprising a separate vessel bottom member and means for supporting said bottom member at a suitable level. . . .

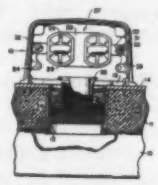
2,932,594. METHOD OF MAKING SURFACE ALLOY JUNCTIONS IN SEMICONDUCTOR BODIES. Charles W. Mueller, Princeton, N. J., assignor to Radio Corp. of America, a corporation of Delaware.



1. In the surface alloying of impurity pellets to monocrystalline semiconductor wafers, the improvement comprising first soldering the pellet to the desired site on a surface of said wafer by contacting said pellet to said wafer and heating the assembly in a reducing atmosphere to a temperature at which the pellet adheres to the wafer but below the temperature at which the pellet appreciably dissolves the wafer material, then alloying said pellet to said wafer by rapidly heating said assembly at a rate of over 1,000° C. per minute in a slightly oxidizing atmosphere to a predetermined temperature at which the pellet material dissolves the wafer material, thereafter cooling said assembly to room temperature.

2,932,683. FITTINGS FOR FLOOR DUCT SYSTEMS. Charles T. Flachbarth, Springfield, Pa., assignor to Walker Brothers, Conshohocken, Pa.

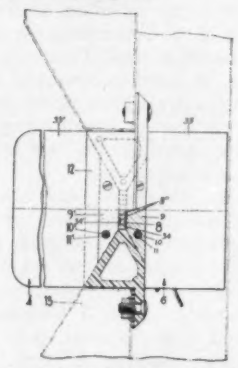
1. A fitting for use with a floor duct system having ducts within the floor structure and inserts extending upward from the top of the ducts, which comprises a base plate adapted to rest on the floor surface, means for connecting the base plate to an insert, a separate shell of inverted U-section adapted to receive an electrical receptacle and having legs spaced to receive the base plate between them, the base plate and the shell having interfitting



parts preventing relative movement of the base plate and shell along one line while permitting relative movement of the base plate and shell along a line transverse to said one line in the plane of the base plate. . . .

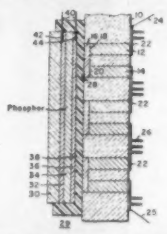
Week of April 19

2,932,953. THERMOELECTRIC COOLING UNITS. Frederick John Becket, Kenton, Harry Bury, Ickenham, and Reggie Smith, Kenton, England, assignors to The General Electric Co. Ltd., London, England.



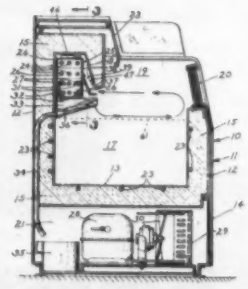
1. A thermoelectric cooling unit comprising an assembly of thermojunctions, each thermojunction having a p-type semiconductor element in association with an n-type semiconductor element and said elements being arranged in rows of alternate p-type and n-type elements which are electrically connected to provide hot junctions and cold junctions disposed on opposite sides of said assembly, first heat exchange means associated with said cold junctions, and second heat exchange means associated with said hot junctions. . . .

2,932,954. ILLUMINATING AND HEATING AND COOLING PANEL MEMBER. William G. Evans, Monroeville, Pa., assignor to Westinghouse Electric Corp., East Pittsburgh, Pa.



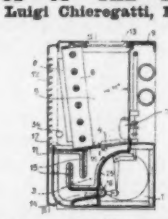
1. A unitary panel member capable of both illuminating and heating and cooling a space, the panel member comprising thermal insulation, thermoelectric members disposed in the thermal insulation, heat exchange means attached to the junctions of the thermoelectric members and exposed from at least one surface of the panel member, and an electroluminescent phosphor member mounted and disposed on said one surface of the panel member in cooperative spaced relation to the thermal radiating means so that the illumination from the electroluminescent panel radiates into the space without substantial restriction from the heat exchange means, and the heat exchange means heats and cools the space efficiently.

2,932,955. GRAVITY-FLOW OPEN-TOPPED REFRIGERATED DISPLAY CABINET. Delbert A. Hargrave and Paul P. Omelianchuk, Minneapolis, Minn., assignors to Schaefer, Inc., Minneapolis.



1. A gravity-flow type open-topped display cabinet for frozen food products comprising frame structure defining a lower product chamber having an open-top and an upper chamber disposed above said lower chamber and communicating therewith adjacent said open-top, refrigerating apparatus comprising lower expansion coils associated with said product chamber and an upper fin-type expansion coil positioned in said upper chamber and connected to said lower expansion coils. . . .

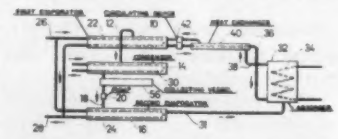
2,932,956. AIR-CONDITIONING APPARATUS OF THE INDUCTION TYPE. Luigi Chieregatti, Milan, Italy.



1. In an air conditioning apparatus of the induction type a horizontally elongated air box of a substantially rectangular cross-sectional shape, a mixing chamber overlying the air box, a longitudinally extending partition in the air box subdividing the interior of the latter into a plenum chamber and a silencing-expansion chamber, the last named chambers being vertically coextensive in the box and being arranged in a mutual side-by-side relationship. . . .

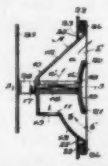
2,932,958. HEAT PUMP. Hilding Jonas Einar Johansson and Per Johan George Norback, Hagfors, Sweden.

A heat pump for utilizing the difference in temperature between a heat yielding and a heat absorbing source which difference is varying, including a first evaporator, a condenser, a second evaporator, an absorber, conduit means for connecting said members in series in the other named, conduit means for



connecting said absorber and said first evaporator in a closed circuit for circulating a pressure reducing agent and a refrigerating medium therebetween. . . .

2,933,035. AIR OUTLET DEVICE FOR VENTILATING APPARATUS. Leonard R. Phillips, West Hartford, Conn., assignor to Anemostat Corp. of America, New York, N. Y.



1. An air outlet device designed to be mounted within an opening in an enclosure and provided with a supply duct, comprising, an elongated, open-front, hollow member provided with end walls, said end walls extending forwardly to seal off the side edges of said opening, said hollow member composed of a unitary wall having in cross section, a transversely extending portion and an upper portion extending upwardly and forwardly from the rear edge of said transversely extending portion. . . .

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POSITIONS WANTED

HEAT PUMP Field Engineer: Seven years experience with General Electric Co. Being terminated due to reduction in personnel. Principal responsibilities included the training of distributors, dealers, and utility personnel in application, installation, service and consumer relations as related to the sale of packaged heat pumps for commercial and residential use. Desire a field sales or sales engineer position with a manufacturer aggressively engaged in the heat pump market. Will accept straight commission, or salary and commission arrangement. Age 37, B.S.M.E., Married. WALTER PURCELL, #99 Spanish Fort Blvd., New Orleans, La.

TWELVE YEARS' experience in commercial and residential heating, ventilating and air conditioning at the medium dealer level, including actual functions of licensed journeyman and master mechanic. Excellent technical background in: refrigeration, especially as applied to remote and built-up central station installation and service; electrical wiring and controls on multizone air and chilled/heated water circuits; low and medium velocity duct system design and installation; trouble shooting; customer relations. Considerable experience in direct-fired absorption packaged units including remote ammonia chillers. I am interested in advancing to manufacturers field service, application engineering, or technical training division, (had teaching experience). Am partner in contractor/dealership on East Coast past 8 years, was heating equipment sales and service manager before that. Age 35. BOX A6596, Air Conditioning, Heating & Refrigeration News.

HAVE FILTER experience — Will travel! More than twenty years experience in every phase of the air filter industry. Design, production, research and development (eighteen patents), field application, test and service, distributor training and sales engineer. Available as direct factory representative in Southwestern or southeastern states. Will accept research and development assignment on contract basis. BOX A6601, Air Conditioning, Heating & Refrigeration News.

POSITIONS AVAILABLE

SHOP SUPERINTENDENT wanted by manufacturing and assembly heating and air conditioning plant in Florida. Must be capable expediting construction, handling employees and cost conscious. Small but fast growing company with good future. Send complete resume — background, age, education, salary expected to: P. O. BOX 5897, Jacksonville 7, Florida.

AN OLD national retail sales organization manufacturing their own exclusive design equipment needs an experienced commercial refrigeration salesman for New York, Pennsylvania, and New England States. No ceiling on earnings which run from $12,000.00 on up commensurate on ability and willingness to work. Give resume of experience and earnings. All replies confidential. Our men know of this ad. Reply to BOX A6597, Air Conditioning, Heating & Refrigeration News.

MANUFACTURERS AGENCIES — Wanted. We are looking for manufacturers agencies in air conditioning, heating and refrigeration in Philadelphia, New Jersey or New York area. We are qualified consultants along these lines. Replies confidential. BOX A6599, Air Conditioning, Heating & Refrigeration News.

PRODUCT ENGINEER — Residential air conditioning—Leading manufacturer is expanding air conditioning development activity. Desire a graduate engineer having at least two years' experience with this type equipment. Located in northern Ohio. Send complete resume and indicate salary requirements. BOX A6602, Air Conditioning, Heating & Refrigeration News.

EQUIPMENT FOR SALE

MOTORS, 1½ h.p., 3 phase. Recently removed from multiple refrigeration system and guaranteed in perfect condition. Delco and Century makes. $17.50 each f.o.b. Washington, D. C. THE PEERLESS SALES CO., INC., 2237 Georgia Ave., N.W.

ATTENTION REFRIGERATION Servicemen. Send for catalog listing values in refrigeration and air conditioning parts, relays, capacitors, compressors. Savings up to 50%. WALTER W. STARR, 2833 Lincoln Ave., Chicago 13, Illinois.

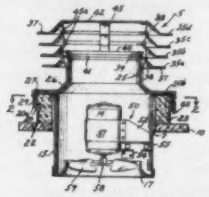
BUSINESS OPPORTUNITIES

ESTABLISHED REFRIGERATION sales & service. Owner operated—Southern California desert boom area. Unlimited opportunity for expansion into air conditioning, auto refrigeration, heat pumps and commercial. 30 years experience, retiring because of age. We will help you get acquainted, and will sell lovely custom built home, adjoining shop. Buyer must stand investigation, terms to be arranged. Write BOX A6600, Air Conditioning, Heating & Refrigeration News.

NEW YORK City—Established refrigeration & air conditioning—sales-service-installations. Sound business enterprise. $18,500 takes all—Terms. Write BOX A6603, Air Conditioning, Heating & Refrigeration News.

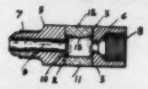
CALIFORNIA—SAN FRANCISCO Bay Area—Air conditioning, refrigeration and appliance sales and service business for sale. Fast growing state—year round activity. Good opportunity—needs strong sales management. Nationally known franchises—complete service facility — trucks — shop — etc. Sales over ½ million 1959. BOX A6604, Air Conditioning, Heating & Refrigeration News.

2,933,036. VENTILATING DEVICE. George M. Breidert, Granada Hills, Calif., assignor to The G. C. Breidert Co., San Fernando, Calif.



In a ventilator for a building roof having an opening therethrough defined by a curb, a tubular base portion of round cross section having in its bottom end an annular member defining an inlet orifice ring coaxial with said base portion and having an annular, radially disposed flange at its top end for engagement with the top surface of said curb. . . .

2,933,060. FLOW INDICATOR. William C. Yocum, Scott Township, Allegheny County, Pa., assignor to Superior Valve & Fittings Co., Pittsburgh.

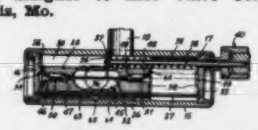


1. A visual flow indicator comprising an elongated forged body having an intermediate portion of square cross section and having an integral portion of hexagonal cross section at each end, the distance diametrically across the hexagonal end portions from one flat face to the other being the same as the distance across the square intermediate section, a pipe connector at each end of the body. . . .

2,933,100. AIR CONDITIONING APPARATUS. Robert W. Waterfill, Montclair, N. J., assignor to Buensod-Stacey, Inc., New York, N. Y.

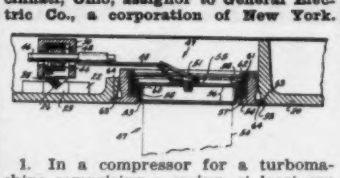
1. In an air conditioning system an air supply duct, air flow control means comprising a pair of plate members extending transversely across a portion of the duct and having adjacent faces in abutting relation, each of said plates having a plurality of apertures therein arranged so as normally to be aligned to define a restricted passageway for the flow of air therethrough, at least one of said members being movable laterally relative to the other to vary the alignment of the apertures and thereby the size of the passageway. . . .

2,933,107. FOUR-WAY REVERSING VALVE. Irvin E. Wiegers, St. Louis, Mo., assignor to Alco Valve Co., St. Louis, Mo.



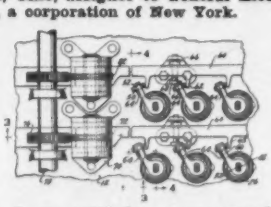
1. In a four-way valve: a housing having closed ends and wall means between the ends; a first high-pressure inlet passage through the wall means; a second low-pressure outlet passage through the wall means, transversely spaced from the first passage; third and fourth passages through the wall means, longitudinally separated one from the other, both transversely spaced from the first and second passages; a piston slidable back and forth within the housing, and forming pressure chambers in the opposite ends of the cylinder. . . .

2,933,234. COMPRESSOR STATOR ASSEMBLY. Gerhard Neumann, Cincinnati, Ohio, assignor to General Electric Co., a corporation of New York.



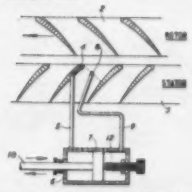
1. In a compressor for a turbomachine comprising a casing, at least one stage of stator vanes rotatably mounted in the casing, lever arms fixed to the base of said stator vanes so as to turn therewith, an actuator band slidably mounted on said casing adjacent each stage of rotatable stator vanes, ball and socket arrangements in said actuator bands openings in the ball portions, said lever arms having rod ends extending axially of the arms through the openings in said ball portions. . . .

2,933,235. VARIABLE STATOR COMPRESSOR. Gerhard Neumann, Cincinnati, Ohio, assignor to General Electric Co., a corporation of New York.



3. In an axial flow compressor having a plurality of stages of adjustable stator vanes therein, an actuator band for each stage, the base portion of each stator vane being provided with a lever arm juxtapositioned to said actuator band, a spring biasing the lever arm to engage the actuator band, a torque tube mounted on the compressor provided with a drive gear for each actuator band, idler gears mounted on the compressor in engagement with the drive gear of an actuator band. . . .

2,933,236. ROTARY DYNAMIC COMPRESSORS. George Cameron Reid Mathieson, near Ferriby, East Yorkshire, England, assignor to Power Jets (Research & Development) Limited, London, England.

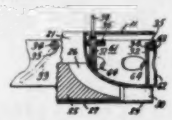


1. A gas compressor plant comprising a rotary compressor having a row of stationary vanes, a first control pressure tapping in the leading edge of a stationary vane and facing in a direction towards the approaching working fluid, a second control pressure tapping in the throat of the working fluid passage between two adjacent vanes, and facing transversely to the direction of flow of working fluid. . . .

Editor's Note: Patents described here have been selected from the "Official Gazette" of the United States Patent Office. They offer only a brief summary of each invention. In some instances only the first part of the digest is presented.

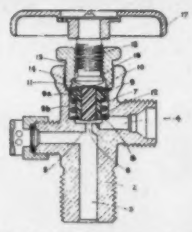
Printed copies of patents, reissued patents, and patent designs may be secured from the Patent Office; patents and reissues are 25¢ each, while designs are furnished at 10¢ each. Address orders to: Commissioner of Patents, Washington 25, D. C.

2,933,237. COMPRESSOR. Kenneth A. Darrow, Sprakers, and Robert H. Johnson, Schenectady, N. Y., assignors to General Electric Co., a corporation of New York.



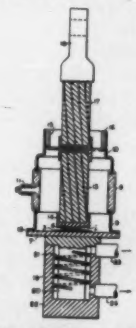
1. A compressor control which comprises in combination, a tapered impeller, a diffuser surrounding said impeller, a casing surrounding said diffuser, a movable annular ring member surrounding said diffuser outlet movable to cover and uncover said diffuser outlet, and unidirectional means operatively connected to said annular ring member to position said annular member throughout a position range including partially covering the diffuser outlet. . . .

2,933,284. DIAPHRAGM PACKLESS VALVE. William C.Yocum, Scott Township, Allegheny County, Pa., assignor to Superior Valve & Fittings Co., Pittsburgh, Pa.



A packless diaphragm valve of the class described having a body with inlet and outlet passages and a partition with a valve port therethrough between the passages, the top of the partition being flat with the top edges of the port being rounded, a valve chamber in the body on the outlet side of the partition, the chamber being of reduced diameter immediately above the partition, with a shoulder in the chamber at the top of that part of the chamber which is of reduced diameter. . . .

2,933,662. SEMICONDUCTOR RECTIFIER DEVICE. John L. Boyer and August P. Colaisco, Pittsburgh, Pa., assignors to Westinghouse Electric Corp., East Pittsburgh, Pa.



1. A semiconductor rectifier device of the P-N junction type, comprising a wafer of semiconductor material, a first metal plate having significantly higher thermal conductivity compared to the semiconductor material and having a coefficient of thermal expansion close to that of the semiconductor material, a thin layer of solder securing said first plate to one side of the semiconductor wafer with a point of good thermal and electrical conductivity, a second metal plate having significantly higher thermal conductivity compared to the semiconductor material and having a coefficient of thermal expanson close to that of the semiconductor material, said second plate being disposed on the opposite side of the semiconductor wafer, and a layer of thermally and electrically conductive material joining the second plate to the semiconductor wafer over a large area of the semiconductor wafer, said layer of thermally and electrically conductive material being of a type which is adapted to alloy with the semiconductor material to form a rectifying junction therein.

Corrosion Engineers To Hear Papers Oct. 11-14

HUNTINGTON, W. Va.—Four technical papers on various aspects of corrosion problems encountered in cooling water systems will be given here Oct. 13.

The papers are among 33 on various subjects related to corrosion control to be presented during the Oct. 11-14 meeting of Northeast Region, National Association of Corrosion Engineers.

FTC, Airguide Enter Into Stipulation Pact on Guarantees

WASHINGTON, D. C. — The Federal Trade Commission announced that Airguide Instrument Co., Chicago, has agreed to discontinue representations that any product is guaranteed unless the nature and extent of the guarantee and how it will be honored are clearly and conspicuously disclosed.

The company sells thermometers, hygrometers, etc.

The FTC said the stipulation agreement does not constitute an admission by the company that it has violated the law.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

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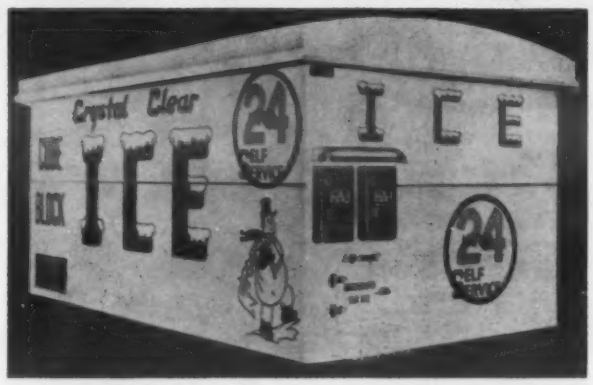

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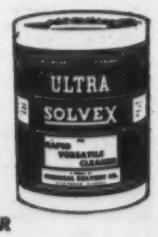

ASK YOUR WHOLESALER

Bulova--

(Continued from Page 1, Col. 2)

produced a line of precision watch rate testing equipment known widely throughout the jewelry industry as the "Watch-Master" in which highly precise temperature-compensated tuning forks are used to provide a time standard. The Bulova subsidiary also specializes in the production of ultra-sonic cleaning devices and is a manufacturer of frequency standards.

Henshel said entry by the Bulova subsidiary into this phase of residential, commercial, and industrial electric heating "fits into the company's current management and sales plans and offers growth potential in a field in which we already have extensive research and manufacturing experience.

"American Time Products' skills used in producing temperature-sensitive metals for tuning forks and other devices, plus Bulova's long experience in electronics, are readily adaptable to the development and production of this new type of radiant heating control instrument," Henshel said.

The thermostats, he explained, operate on new principles of temperature sensing. They respond primarily to radiant heat energy as supplied by the electric radiant heating units in addition to the effects of sunlight and changes in air temperature.

Precise control (to within ½ degree) is achieved by making the cover plate of the thermostat itself of metals which have extremely high temperature sensitivity, Henshel said.

The new automatic control units will be priced competitively and are installed in the manner of conventional electric heating thermostats, it was stated. However, Henshel said, for ultimate comfort each is designed to control the operation of electric heating units in only one room.

"The desired comfort level for the area is set in the conventional manner on the thermostat plate which resembles an ordinary electric light switch," it was noted. "If desired it can be painted to harmonize with the color scheme of the room."

Tecumseh Buys--

(Continued from Page 1, Col. 2)

semi-conductors and in their application in Hall effect and magneto resistance devices. The company has been actively engaged for many years in the development of thermoelectric components and devices."

It was also stated that the entire staff of scientific and technical personnel headed by Dr. Bulman will continue on in their present activities.

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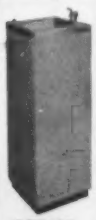

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Cooling Sales--

(Continued from Page 1, Col. 5)

the first five months of 1960 than in the same period of 1959. An estimated 888,000 room coolers were shipped—up 22%.

Shipments of unitary air conditioners, other than room coolers, were 17% higher, auguring well for total 1960 production because historically about 65% of production falls in the first half of the year.

Shipments of year-round air conditioners, except heat pumps, declined 14%—because of increased shipments of heat pumps and a 18% decline in the number of new housing starts.

Shipments of self-contained heat pumps were 44% higher; and other than self-contained units, 14%.

Though exact data are not yet available, it is estimated that shipments of large central systems closely approximated the levels attained in early 1959.

Shipments of the refrigeration segment of the industry, which supplies commercial establishments, such as supermarkets, and industrial plants, were about 5% greater in early 1960 than they were in early 1959.

Exports of air conditioning and refrigeration equipment in the first five months of 1960 were 27% greater than in the same period in 1959.

Because of the greater demand developing in the southern hemisphere for air conditioning and refrigeration equipment, export trade will probably become more attractive to manufacturers who are seeking ways of eliminating seasonal demand.

The outlook in 1960 for the air conditioning and refrigeration equipment industry is good, it said. Shipments should exceed 1959 levels by 10%. The percentage increase for shipments of air conditioning should be even greater.

Defense Dept. Denies Waste Charge--

(Continued from Page 1, Col. 1)

could not agree with the G.A.O.'s "major findings or that there is a need for significant improvement in departmental guidance and reviews."

Among the charges made by the G.A.O., set up by Congress to monitor Federal spending:

That the military defeated the purpose of Congressional cost limitations by adding luxury features such as central air conditioning, tile bathrooms, and parquet floors to houses in relatively low-cost construction areas. The report said the services should have taken advantage of any possibility to reduce costs by sticking to standard specifications and not pushing luxury items that would push costs to the maximum.

That the Air Force, under the Capehart program, is building housing at several locations at costs averaging 37% more than authorized by Congress for "officers of the same or similar rank when housing is to be built from appropriated funds."

The G.A.O. also accused the Air Force and Navy of failing in many instances to obtain reductions in contract prices when the contractor used materials other than those specified.

In addition, the services, particularly the Air Force, were accused of laxity in not seeking to recover costs resulting from correcting deficiencies in some housing units.

Under the Capehart program, the government provides land and utilities to contractors to build family housing on military installations for uniformed and key civilian personnel. The housing is financed through mortgages paid off as the units are rented.

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OR REFRIGERATION
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